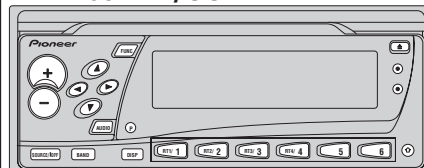


# Service Manual

**Pioneer**

DEH-P86DHR/UC



ORDER NO.  
**CRT2302**

MULTI-CD CONTROL HIGH POWER CD PLAYER WITH RDS/ID-LOGIC TUNER

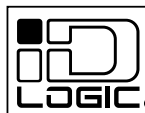
# DEH-P86DHR

UC

MULTI-CD CONTROL HIGH POWER CD PLAYER WITH ID-LOGIC TUNER

# DEH-P76DH

UC



ID LOGIC IS A TRADEMARK  
OF AND IS MANUFACTURED  
UNDER LICENSE FROM PRS  
CORPORATION, N.Y. & H.K.  
® ALL RIGHTS RESERVED.



- See the separate manual CX-597(CRT1829) for the CD mechanism description, disassembly and circuit description.
- The CD mechanism employed in this model is one of S7 series.
- CD Player Service Precautions

1. For pickup unit(CXX1230) handling, please refer to "Disassembly"(CX-597 Service Manual CRT1829). During replacement, handling precautions shall be taken to prevent an electrostatic discharge(protection by a short pin).
2. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.
3. Please checking the grating after changing the service pickup unit(see page 57).

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**PIONEER ELECTRONIC CORPORATION** 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan  
**PIONEER ELECTRONICS SERVICE INC.** P.O.Box 1760, Long Beach, CA 90801-1760 U.S.A.  
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**PIONEER ELECTRONICS ASIACENTRE PTE.LTD.** 253 Alexandra Road, #04-01, Singapore 159936

## 1. SAFETY INFORMATION

### CAUTION

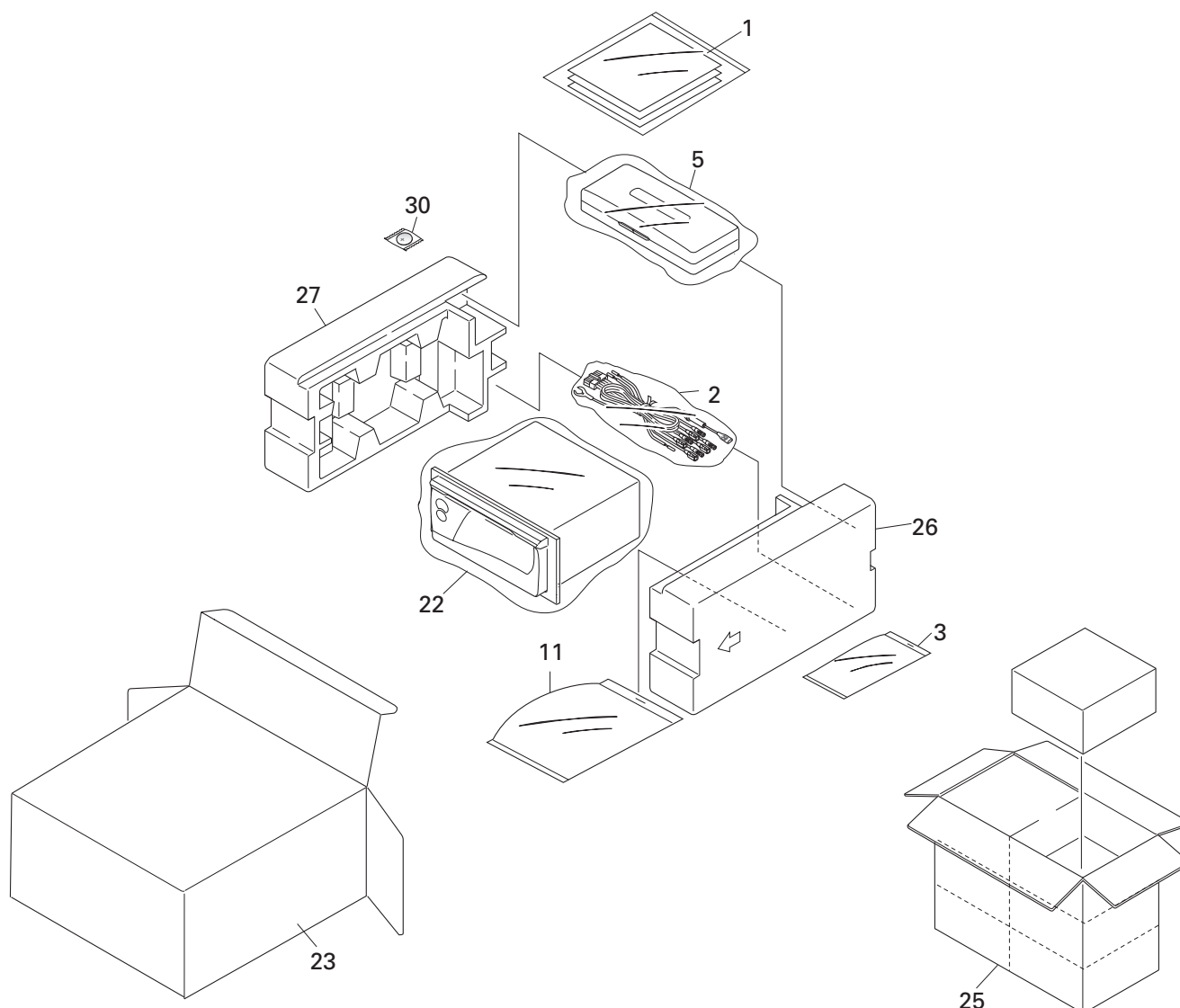
This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely; you should not risk trying to do so and refer the repair to a qualified service technician.

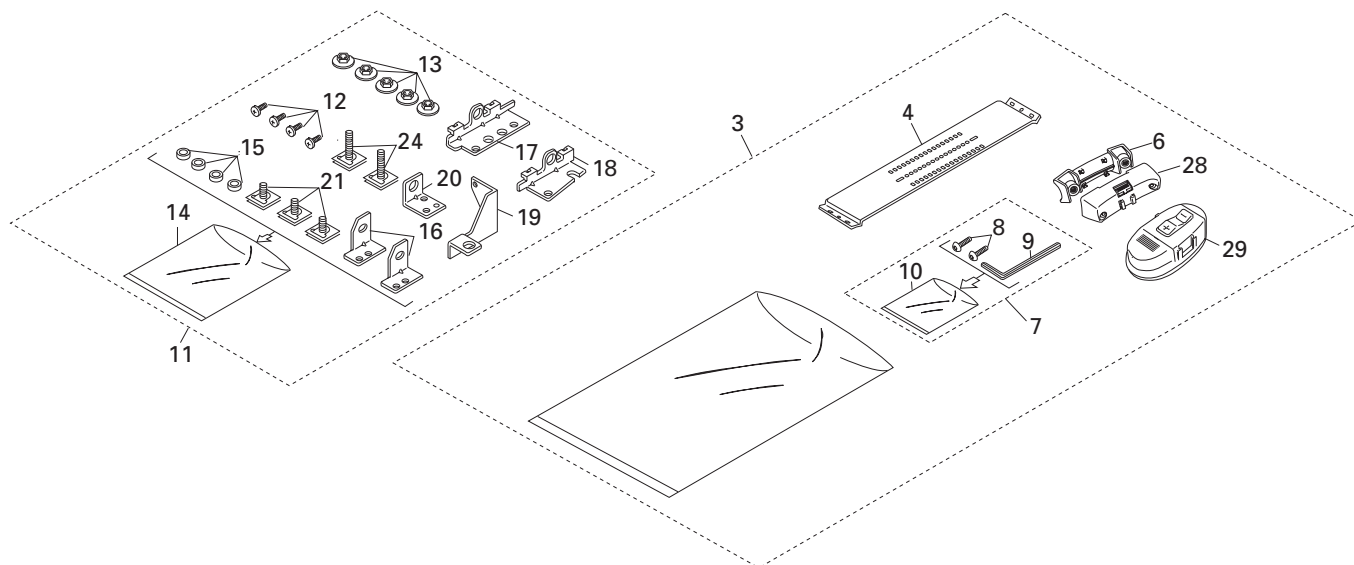
### WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.  
Health & Safety Code Section 25249.6 - Proposition 65

## 2. EXPLODED VIEWS AND PARTS LIST

### 2.1 PACKING



**NOTE:**

● Parts marked by "\*" are generally unavailable because they are not in our Master Spare Parts List.

● Screws adjacent to ▽ mark on the product are used for disassembly.

**(1) PACKING SECTION PARTS LIST**

| Mark No. | Description         | Part No.              | Mark No. | Description         | Part No.              |
|----------|---------------------|-----------------------|----------|---------------------|-----------------------|
| * 1-1    | Card                | ARY1048               | 15       | Spacer              | CLA2598               |
| 1-2      | Owner's Manual      | See Contrast table(2) | 16       | Bracket             | CNC6767               |
| 1-3      | Installation Manual | See Contrast table(2) | 17       | Bracket             | CNC5506               |
| 1-4      | Polyethylene Bag    | CEG1116               | 18       | Bracket             | CNC5507               |
| * 1-5    | Caution Card        | CRP1158               | 19       | Bracket             | CNC5686               |
| * 1-6    | Label               | CRW1343               | 20       | Bracket             | CNC5687               |
| * 1-7    | Caution Card        | See Contrast table(2) | 21       | Bolt Unit           | CXA7960               |
| 2        | Cord                | CDE5885               | 22       | Cover               | CEG1228               |
| 3        | Remote Control Assy | CXB3488               | 23       | Carton              | See Contrast table(2) |
| 4        | Belt                | CZN6416               | 24       | Bolt Unit           | CXA7961               |
| 5        | Detach Case Assy    | CXB3705               | 25       | Contain Box         | See Contrast table(2) |
| 6        | Holder Assy         | CZX3173               | 26       | Protector           | CHP2113               |
| 7        | Screw Assy          | CZE3169               | 27       | Protector           | CHP2114               |
| * 8      | Screw               | RMZ30H060FBK          | 28       | Holder Assy         | CZX3172               |
| * 9      | Hexagonal Wrench    | CZE3176               | 29       | Remote Control Assy | CZX3231               |
| * 10     | Polyethylene Bag    | CEG-127               | 30       | Battery             | CEX1030               |
| 11       | Accessory Assy      | CEA2006               |          |                     |                       |
| 12       | Screw               | BSZ30P050FMC          |          |                     |                       |
| 13       | Nut                 | CBN1012               |          |                     |                       |
| * 14     | Polyethylene Bag    | CEG1101               |          |                     |                       |

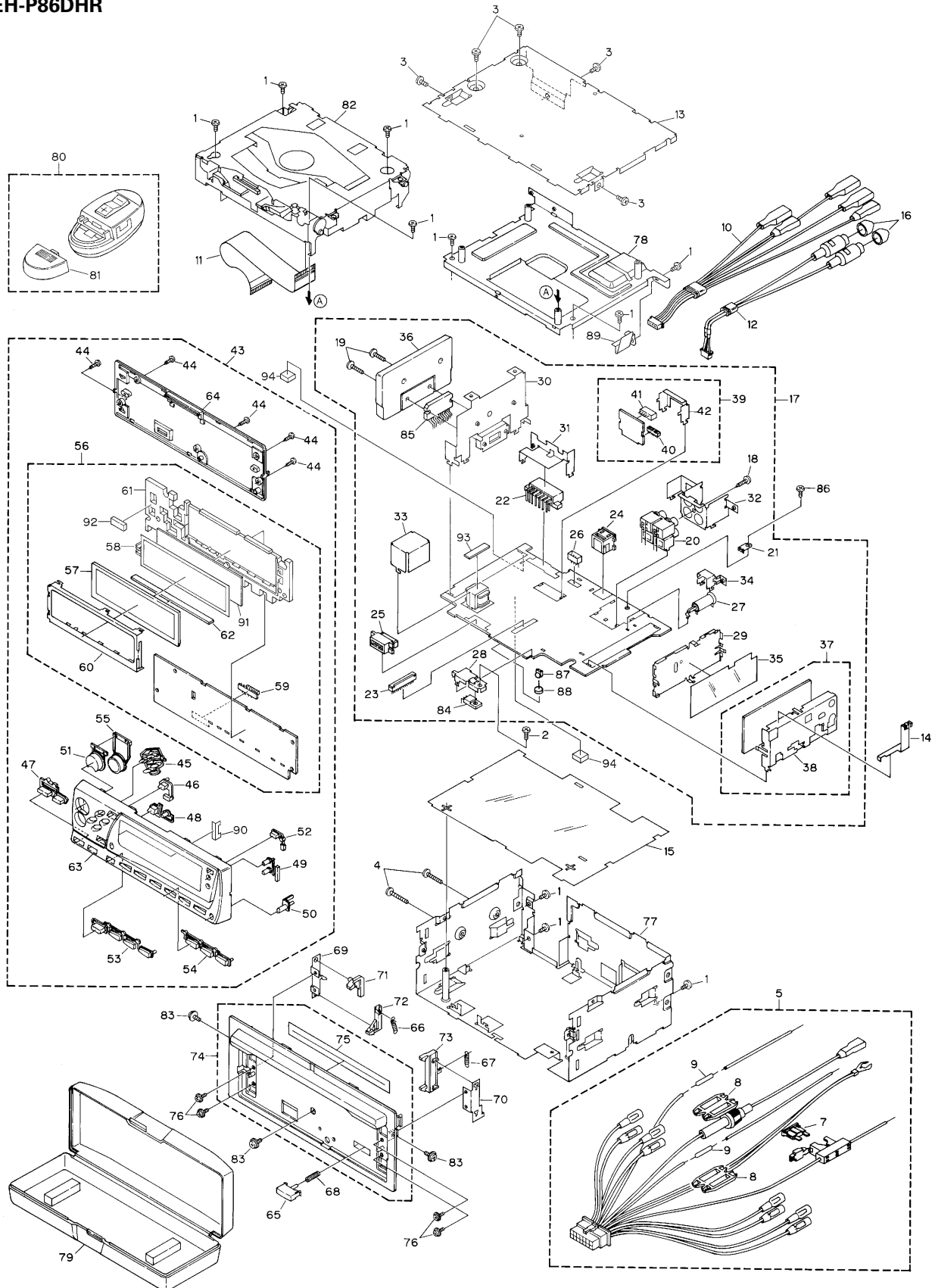
**(2) CONTRAST TABLE**

DEH-P86DHR/UC and DEH-P76DH/UC have the same construction except for the following:

| Mark No. | Description         | Part No.         |                          |
|----------|---------------------|------------------|--------------------------|
|          |                     | DEH-P86DHR/UC    | DEH-P76DH/UC             |
| 1-2      | Owner's Manual      | CRB1530(English) | CRD2867(English, French) |
| 1-3      | Installation Manual | CRB1531(English) | CRD2868(English, French) |
| * 1-7    | Caution Card        | CRN1051          | Not used                 |
| 23       | Carton              | CHG3675          | CHG3676                  |
| 25       | Contain Box         | CHL3675          | CHL3676                  |

## 2.2 EXTERIOR

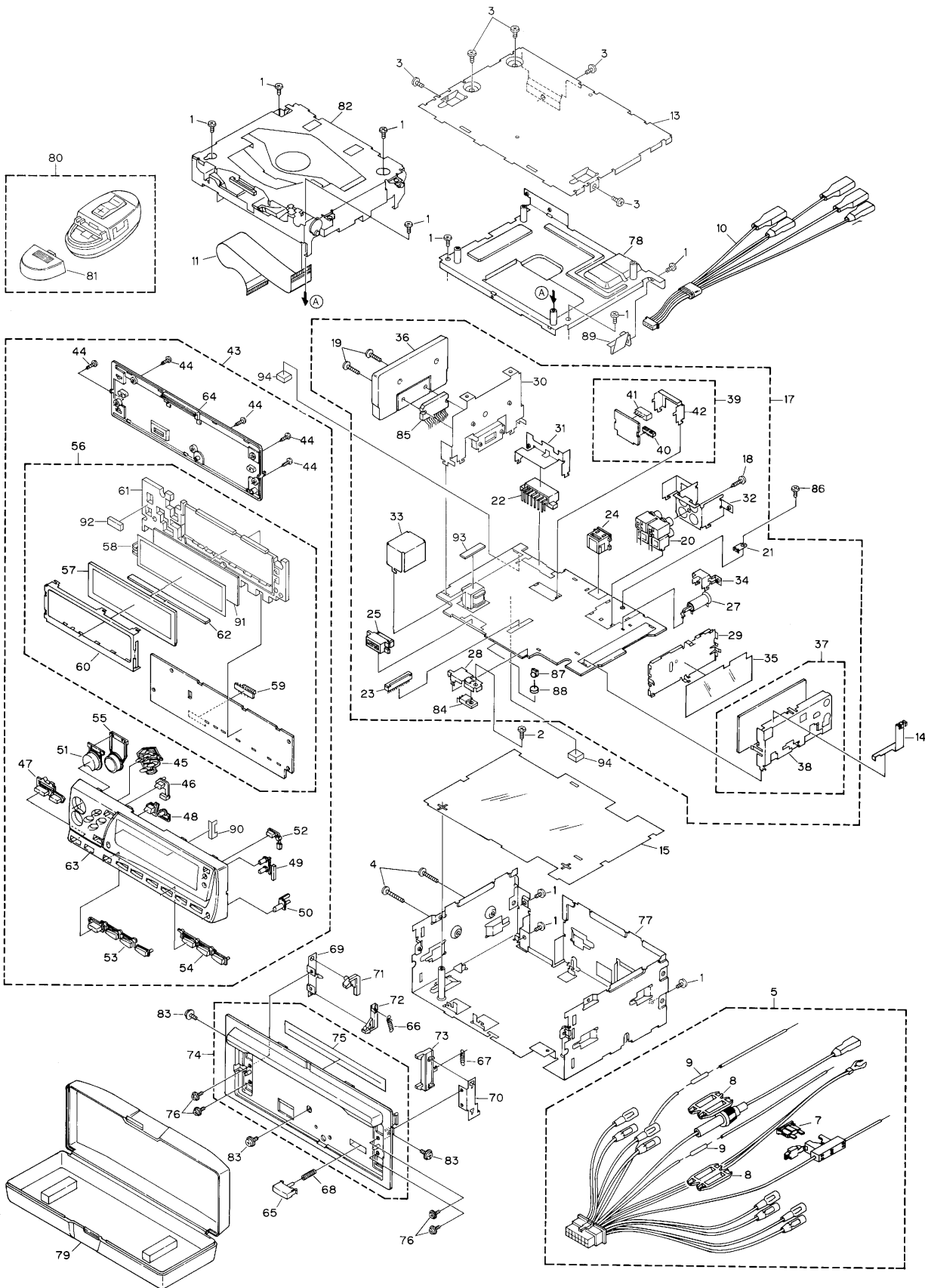
### ● DEH-P86DHR



# ● EXTERIOR SECTION PARTS LIST

| Mark No. | Description         | Part No.     | Mark No. | Description         | Part No.     |
|----------|---------------------|--------------|----------|---------------------|--------------|
| 1        | Screw               | BSZ26P060FMC | 46       | Button(FUNC)        | CAC4887      |
| 2        | Screw               | BSZ26P080FMC | 47       | Button(SOURCE)      | CAC4888      |
| 3        | Screw               | BSZ30P050FMC | 48       | Button(AUDIO)       | CAC4889      |
| 4        | Screw               | BSZ30P200FMC | 49       | Button(LOUD,CLOCK)  | CAC4893      |
| 5        | Cord Assy           | CDE5885      | 50       | Button(DETACH)      | CAC5951      |
| 6        | .....               |              | 51       | Button(+)           | CAC6033      |
| 7        | Fuse(10A)           | CEK1136      | 52       | Button(EJECT)       | CAC6035      |
| 8        | Cap                 | CNS1472      | 53       | Button(1,2,3,DISP)  | CAC6093      |
| 9        | Resistor            | RS1/2PMF102J | 54       | Button(4,5,6)       | CAC6094      |
| 10       | Cord Assy           | CDE5997      | 55       | Button(-)           | CAC6034      |
| 11       | Cable               | CDE5269      | 56       | Keyboard Unit       | CWX2069      |
| 12       | Cord Assy           | CDE5297      | 57       | LCD                 | CAW1389      |
| 13       | Case                | CNB2468      | 58       | EL                  | CEL1488      |
| 14       | Holder              | CNC7005      | 59       | Connector(CN1901)   | CKS3580      |
| 15       | Insulator           | CNM5076      | 60       | Holder              | CNC7198      |
| 16       | Cap                 | CNV2680      | 61       | Holder              | CNV4772      |
| 17       | Tuner Amp Unit      | CWM6379      | 62       | Connector           | CNV4791      |
| 18       | Screw               | BPZ26P100FMC | 63       | Grille Unit         | CXB3509      |
| 19       | Screw               | BSZ26P160FMC | 64       | Cover Unit          | CXB3513      |
| 20       | Pin Jack(CN251)     | CKB1031      | 65       | Button              | CAC5180      |
| 21       | Terminal(CN504)     | CKF1059      | 66       | Spring              | CBH1834      |
| 22       | Plug(CN901)         | CKM1304      | 67       | Spring              | CBH1835      |
| 23       | Connector(CN651)    | CKS2255      | 68       | Spring              | CBH1996      |
| 24       | Connector(CN101)    | CKS3408      | 69       | Bracket             | CNC6135      |
| 25       | Connector(CN801)    | CKS3581      | 70       | Bracket             | CNC6791      |
| 26       | Connector(CN271)    | CKS3584      | 71       | Arm                 | CNV4692      |
| 27       | Antenna Jack(CN503) | CKX1056      | 72       | Arm                 | CNV4693      |
| 28       | Holder              | CNC5013      | 73       | Arm                 | CNV4951      |
| 29       | Holder              | CNC8021      | 74       | Panel Unit          | CXB3507      |
| 30       | Holder              | CNC8278      | 75       | Cover               | CNM4875      |
| 31       | Holder              | CNC6880      | 76       | Screw               | IMS20P040FZK |
| 32       | Holder              | CNC7196      | 77       | Chassis Unit        | CXA9714      |
| 33       | Holder              | CNC6889      | 78       | Chassis Unit        | CXA9718      |
| 34       | Holder              | CNC7001      | 79       | Detach Case Assy    | CXB3705      |
| 35       | Insulator           | CNM4684      | 80       | Remote Control Assy | CZX3231      |
| 36       | Heat Sink           | CNR1435      | 81       | Cover               | CZN6410      |
| 37       | FM/AM Tuner Unit    | CWE1472      | 82       | CD Mechanism Module | CXK5005      |
| 38       | Holder              | CNC6554      | 83       | Screw               | ISS26P060FZK |
| 39       | Detach Alarm Unit   | CWM5291      | 84       | Transistor(Q971)    | 2SD2396      |
| 40       | Plug(CN852)         | CKS1617      | 85       | IC(IC201)           | PAL005A      |
| 41       | Connector(CN851)    | CKS3585      | 86       | Screw               | ISS26P060FMC |
| 42       | Holder              | CNC6912      | 87       | LED(D851)           | BR4361F      |
| 43       | Detach Grille Assy  | CXB3728      | 88       | Bush                | CNV-724      |
| 44       | Screw               | BPZ20P100FZK | 89       | Holder              | CNC8190      |
| 45       | Button              | CAC5947      | 90       | Spacer              | CNM5385      |
|          |                     |              | *        | 91 Cushion          | CNM5316      |
|          |                     |              | *        | 92 Cushion          | CNM5315      |
|          |                     |              | *        | 93 Cushion          | CNM6297      |
|          |                     |              |          | 94 Spacer           | CNM4154      |

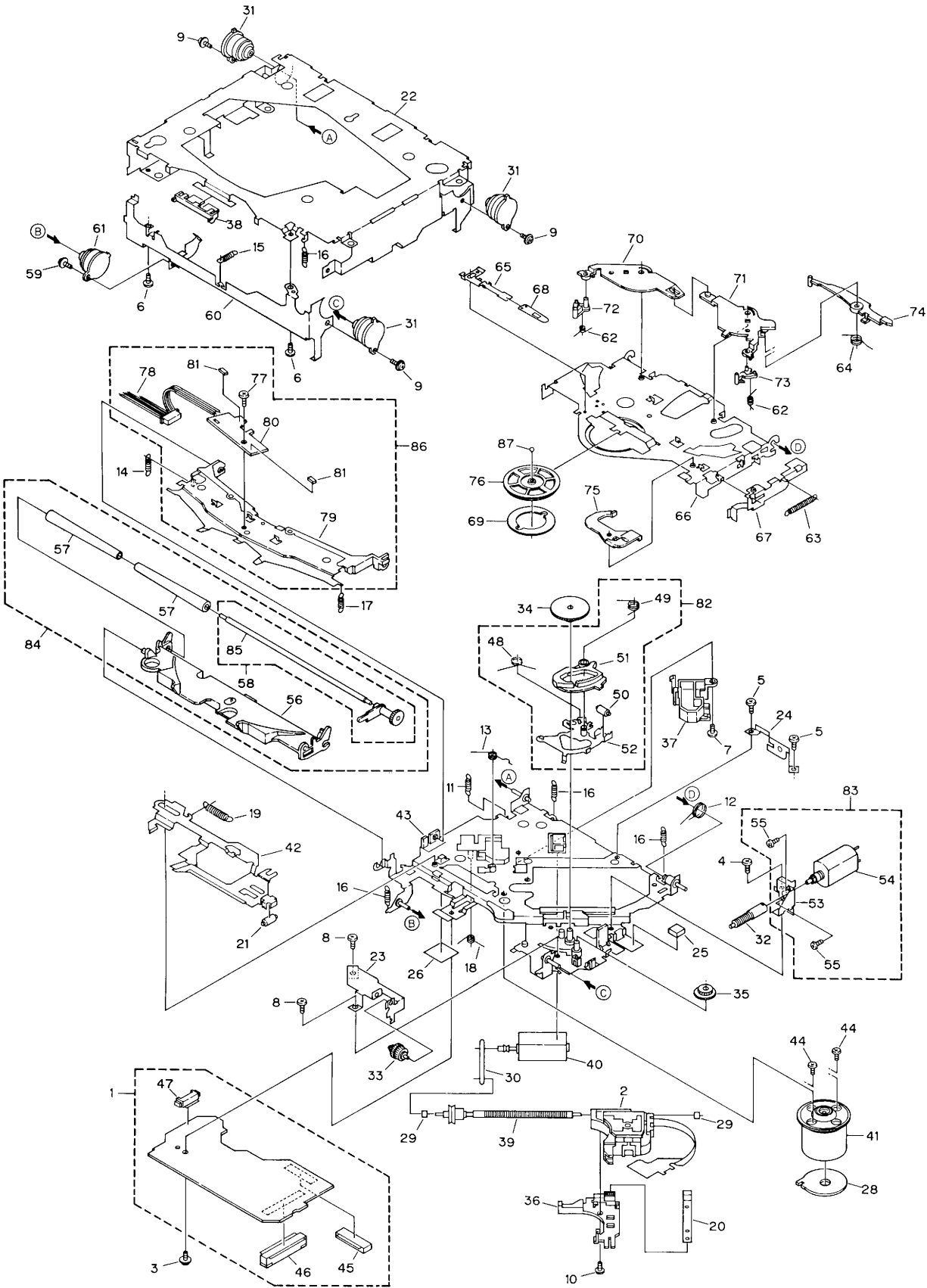
● DEH-P76DH



# ● EXTERIOR SECTION PARTS LIST

| Mark No. | Description         | Part No.     | Mark No. | Description         | Part No.     |
|----------|---------------------|--------------|----------|---------------------|--------------|
| 1        | Screw               | BSZ26P060FMC | 46       | Button(FUNC)        | CAC4887      |
| 2        | Screw               | BSZ26P080FMC | 47       | Button(SOURCE)      | CAC4888      |
| 3        | Screw               | BSZ30P050FMC | 48       | Button(AUDIO)       | CAC4889      |
| 4        | Screw               | BSZ30P200FMC | 49       | Button(LOUD,CLOCK)  | CAC4893      |
| 5        | Cord Assy           | CDE5885      | 50       | Button(DETACH)      | CAC5951      |
| 6        | .....               |              | 51       | Button(+)           | CAC6033      |
| 7        | Fuse(10A)           | CEK1136      | 52       | Button(EJECT)       | CAC6035      |
| 8        | Cap                 | CNS1472      | 53       | Button(1,2,3,DISP)  | CAC6036      |
| 9        | Resistor            | RS1/2PMF102J | 54       | Button(4,5,6)       | CAC6037      |
| 10       | Cord Assy           | CDE5997      | 55       | Button(-)           | CAC6034      |
| 11       | Cable               | CDE5269      | 56       | Keyboard Unit       | CWX2070      |
| 12       | .....               |              | 57       | LCD                 | CAW1390      |
| 13       | Case                | CNB2468      | 58       | EL                  | CEL1488      |
| 14       | Holder              | CNC7005      | 59       | Connector(CN1901)   | CKS3580      |
| 15       | Insulator           | CNM5076      | 60       | Holder              | CNC7198      |
| 16       | .....               |              | 61       | Holder              | CNV4772      |
| 17       | Tuner Amp Unit      | CWM6380      | 62       | Connector           | CNV4791      |
| 18       | Screw               | BPZ26P100FMC | 63       | Grille Unit         | CXB3510      |
| 19       | Screw               | BSZ26P160FMC | 64       | Cover Unit          | CXB3513      |
| 20       | Pin Jack(CN251)     | CKB1031      | 65       | Button              | CAC5180      |
| 21       | Terminal(CN504)     | CKF1059      | 66       | Spring              | CBH1834      |
| 22       | Plug(CN901)         | CKM1304      | 67       | Spring              | CBH1835      |
| 23       | Connector(CN651)    | CKS2255      | 68       | Spring              | CBH1996      |
| 24       | Connector(CN101)    | CKS3408      | 69       | Bracket             | CNC6135      |
| 25       | Connector(CN801)    | CKS3581      | 70       | Bracket             | CNC6791      |
| 26       | .....               |              | 71       | Arm                 | CNV4692      |
| 27       | Antenna Jack(CN503) | CKX1056      | 72       | Arm                 | CNV4693      |
| 28       | Holder              | CNC5013      | 73       | Arm                 | CNV4951      |
| 29       | Holder              | CNC8021      | 74       | Panel Unit          | CXB3507      |
| 30       | Holder              | CNC8278      | 75       | Cover               | CNM4875      |
| 31       | Holder              | CNC6892      | 76       | Screw               | IMS20P040FZK |
| 32       | Holder              | CNC7196      | 77       | Chassis Unit        | CXA9714      |
| 33       | Holder              | CNC6889      | 78       | Chassis Unit        | CXA9718      |
| 34       | Holder              | CNC7001      | 79       | Detach Case Assy    | CXB3705      |
| 35       | Insulator           | CNM4684      | 80       | Remote Control Assy | CZX3231      |
| 36       | Heat Sink           | CNR1435      | 81       | Cover               | CZN6510      |
| 37       | FM/AM Tuner Unit    | CWE1417      | 82       | CD Mechanism Module | CXK5005      |
| 38       | Holder              | CNC6555      | 83       | Screw               | ISS26P060FZK |
| 39       | Detach Alarm Unit   | CWM5291      | 84       | Transistor(Q971)    | 2SD2396      |
| 40       | Plug(CN852)         | CKS1617      | 85       | IC(IC201)           | PAL005A      |
| 41       | Connector(CN851)    | CKS3585      | 86       | Screw               | ISS26P060FMC |
| 42       | Holder              | CNC6912      | 87       | LED(D851)           | BR4361F      |
| 43       | Detach Grille Assy  | CXB3729      | 88       | Bush                | CNV-724      |
| 44       | Screw               | BPZ20P100FZK | 89       | Holder              | CNC8190      |
| 45       | Button              | CAC5947      | 90       | Spacer              | CNM5385      |
|          |                     |              | *        | 91 Cushion          | CNM5316      |
|          |                     |              | *        | 92 Cushion          | CNM5315      |
|          |                     |              | *        | 93 Cushion          | CNM6297      |
|          |                     |              |          | 94 Spacer           | CNM4154      |

2.3 CD MECHANISM MODULE



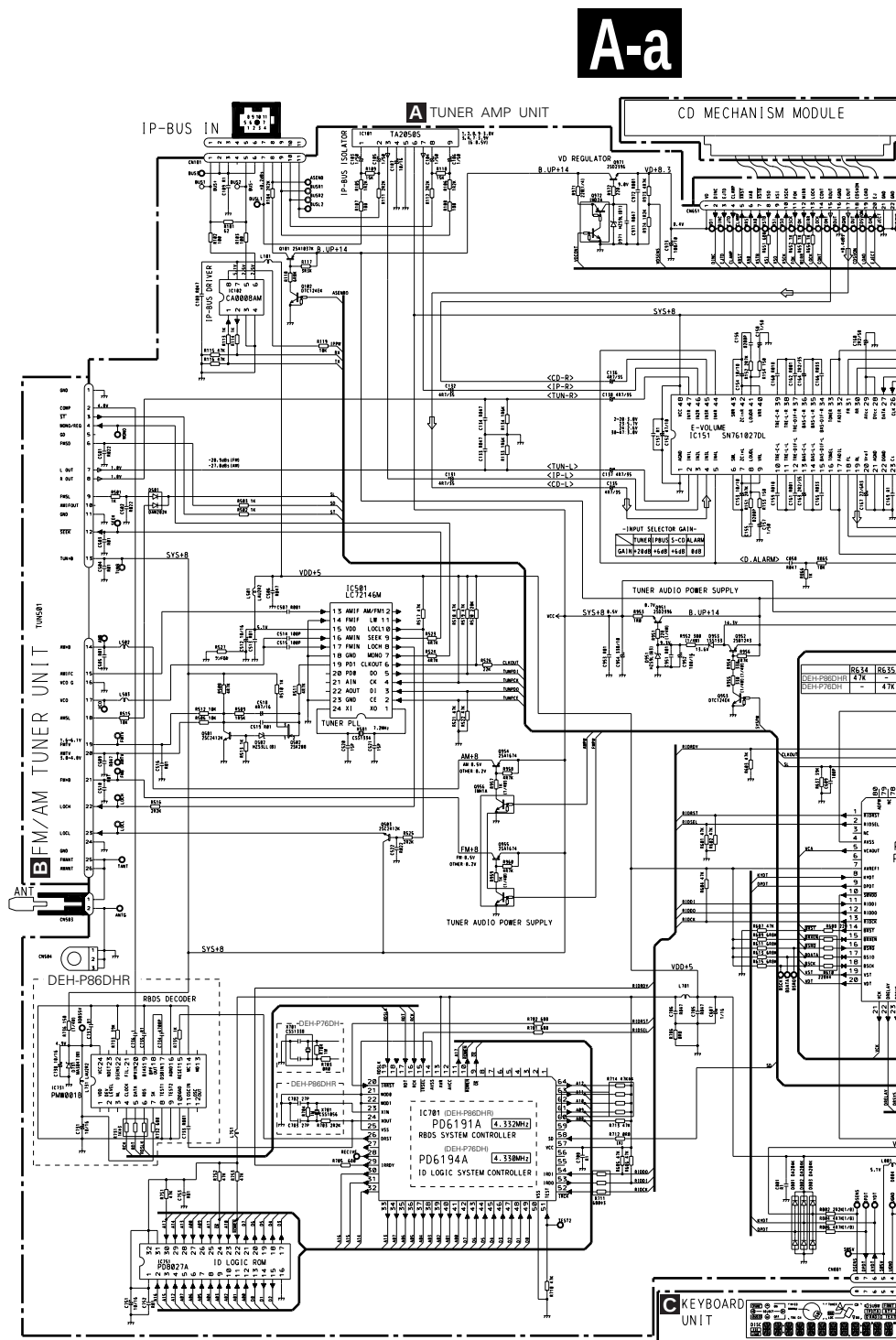
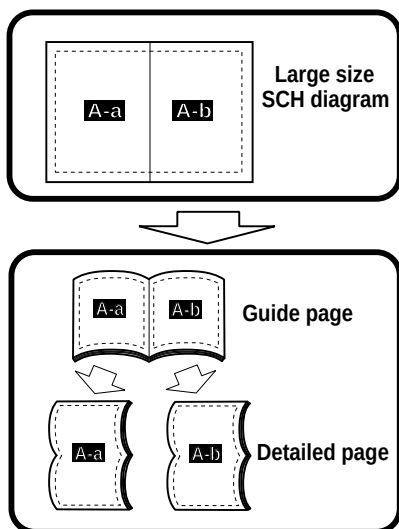
# ● CD MECHANISM MODULE SECTION PARTS LIST

| Mark No. | Description            | Part No.     | Mark No. | Description             | Part No.     |
|----------|------------------------|--------------|----------|-------------------------|--------------|
| 1        | Control Unit           | CWX2268      | 46       | Connector(CN701)        | CKS2774      |
| 2        | Pickup Unit(Service)   | CXX1230      | 47       | Connector(CN801)        | CKS2196      |
| 3        | Screw                  | IMS26P035FMC | 48       | Spring                  | CBH1832      |
| 4        | Screw                  | BMZ20P025FMC | 49       | Spring                  | CBH1833      |
| 5        | Screw                  | BMZ20P040FMC | 50       | Roller                  | CLA2627      |
| 6        | Screw                  | BSZ20P040FMC | 51       | Arm                     | CNV4136      |
| 7        | Screw                  | CBA1077      | 52       | Arm Unit                | CXA8565      |
| 8        | Screw                  | CBA1250      | 53       | Bracket                 | CNC6056      |
| 9        | Screw                  | CBA1296      | 54       | Load Motor Unit(S7)(M3) | CXA8702      |
| 10       | Screw                  | CBA1362      | 55       | Screw                   | JFZ20P025FMC |
| 11       | Spring                 | CBH1724      | 56       | Arm                     | CNV4120      |
| 12       | Spring                 | CBH1729      | 57       | Roller                  | CNV4509      |
| 13       | Spring                 | CBH1730      | 58       | Gear Unit(S7)           | CXA8701      |
| 14       | Spring                 | CBH1731      | 59       | Screw                   | CBA1455      |
| 15       | Spring                 | CBH1732      | 60       | Frame                   | CNC5797      |
| 16       | Spring                 | CBH1745      | 61       | Damper                  | CNV3974      |
| 17       | Spring                 | CBH1848      | 62       | Spring                  | CBH1736      |
| 18       | Spring                 | CBH1849      | 63       | Spring                  | CBH1863      |
| 19       | Spring                 | CBH1939      | 64       | Spring                  | CBH1945      |
| 20       | Spring                 | CBL1214      | 65       | Spring                  | CBL1326      |
| 21       | Roller                 | CLA2627      | 66       | Arm                     | CNC8364      |
| 22       | Frame                  | CNC5796      | 67       | Lever                   | CNC6054      |
| 23       | Bracket                | CNC5871      | 68       | Spacer                  | CNM3315      |
| * 24     | Bracket                | CNC6376      | 69       | Sheet                   | CNM4849      |
| 25       | Cushion                | CNM3917      | 70       | Arm                     | CNV5031      |
| 26       | Sheet                  | CNM4873      | 71       | Arm                     | CNV4123      |
| 27       | .....                  |              | 72       | Arm                     | CNV4124      |
| * 28     | PCB                    | CNP4230      | 73       | Arm                     | CNV4125      |
| 29       | Bearing                | CNR1415      | 74       | Arm                     | CNV4138      |
| 30       | Belt                   | CNT1071      | 75       | Arm                     | CNV5032      |
| 31       | Damper                 | CNV3974      | 76       | Clamper                 | CNV5308      |
| 32       | Gear                   | CNV5789      | 77       | Screw                   | CBA1250      |
| 33       | Gear                   | CNV5820      | 78       | Connector(CN1)          | CDE4576      |
| 34       | Gear                   | CNV4857      | 79       | Arm                     | CNC7383      |
| 35       | Gear                   | CNV5821      | * 80     | Gathering PCB           | CNX2445      |
| 36       | Holder                 | CNV4663      | 81       | Photo-transistor(Q1, 2) | CPT-230S-X   |
| 37       | Holder                 | CNV5071      | 82       | Elbow Arm Assy(S7)      | CXA8889      |
| 38       | Guide                  | CNV5823      | 83       | Load Motor Assy(S7)     | CXA8891      |
| 39       | Screw Unit(S7)         | CXA8699      | 84       | LO Arm Assy(S7)         | CXA8892      |
| 40       | CRG Motor Unit(S7)(M2) | CXB3043      | 85       | Shaft                   | CLA3133      |
| 41       | Motor Unit(M1)         | CXA8912      | 86       | Guide Arm Assy(S7)      | CXB1850      |
| 42       | Lever Unit             | CXA9300      | 87       | Ball                    | CNR1189      |
| 43       | Chassis Unit           | CXB2574      |          |                         |              |
| 44       | Screw                  | JFZ20P025FMC |          |                         |              |
| 45       | Connector(CN101)       | CKS1953      |          |                         |              |

### 3. SCHEMATIC DIAGRAM

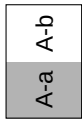
#### 3.1 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to “EXPLODED VIEWS AND PARTS LIST” or “ELECTRICAL PARTS LIST”.

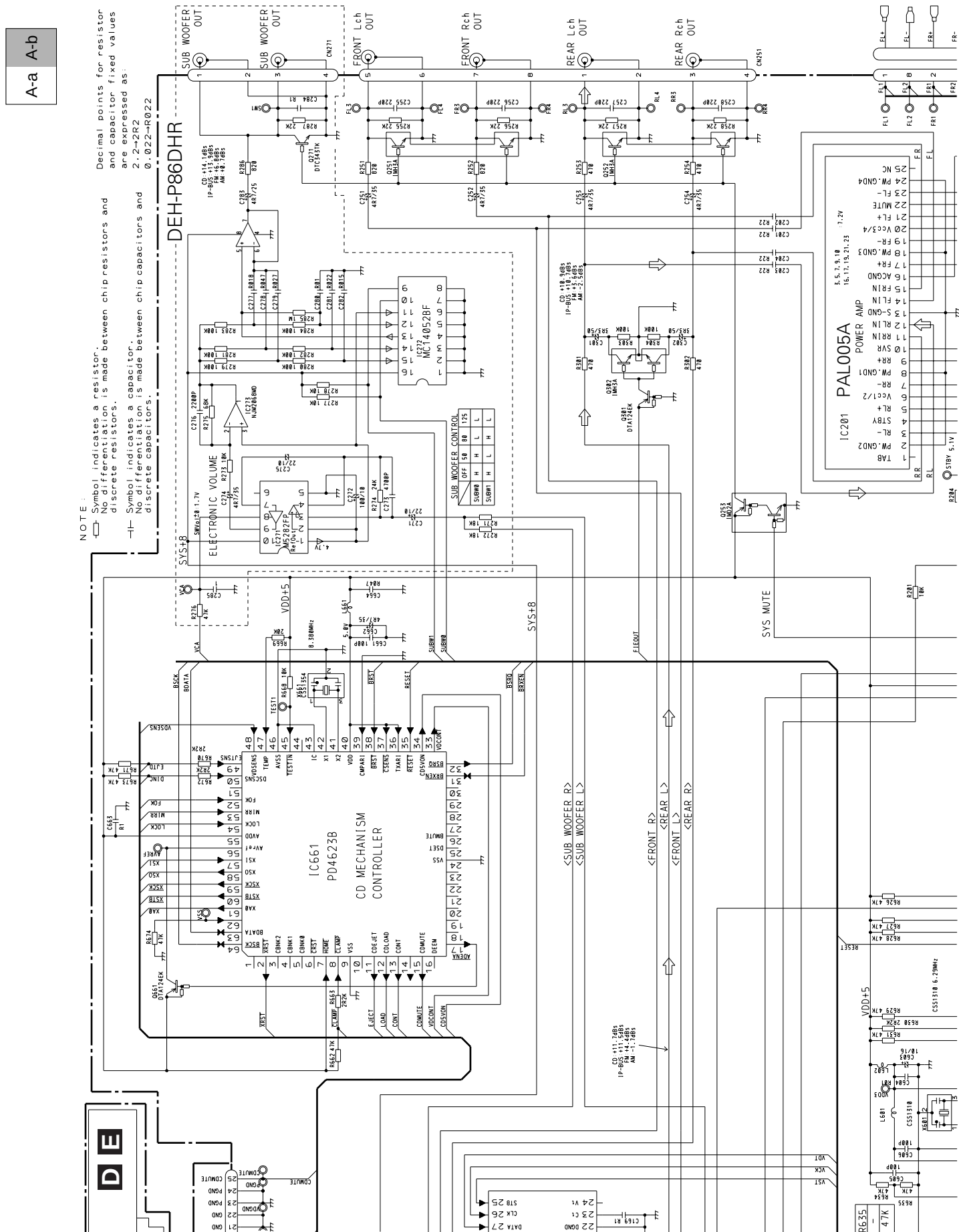


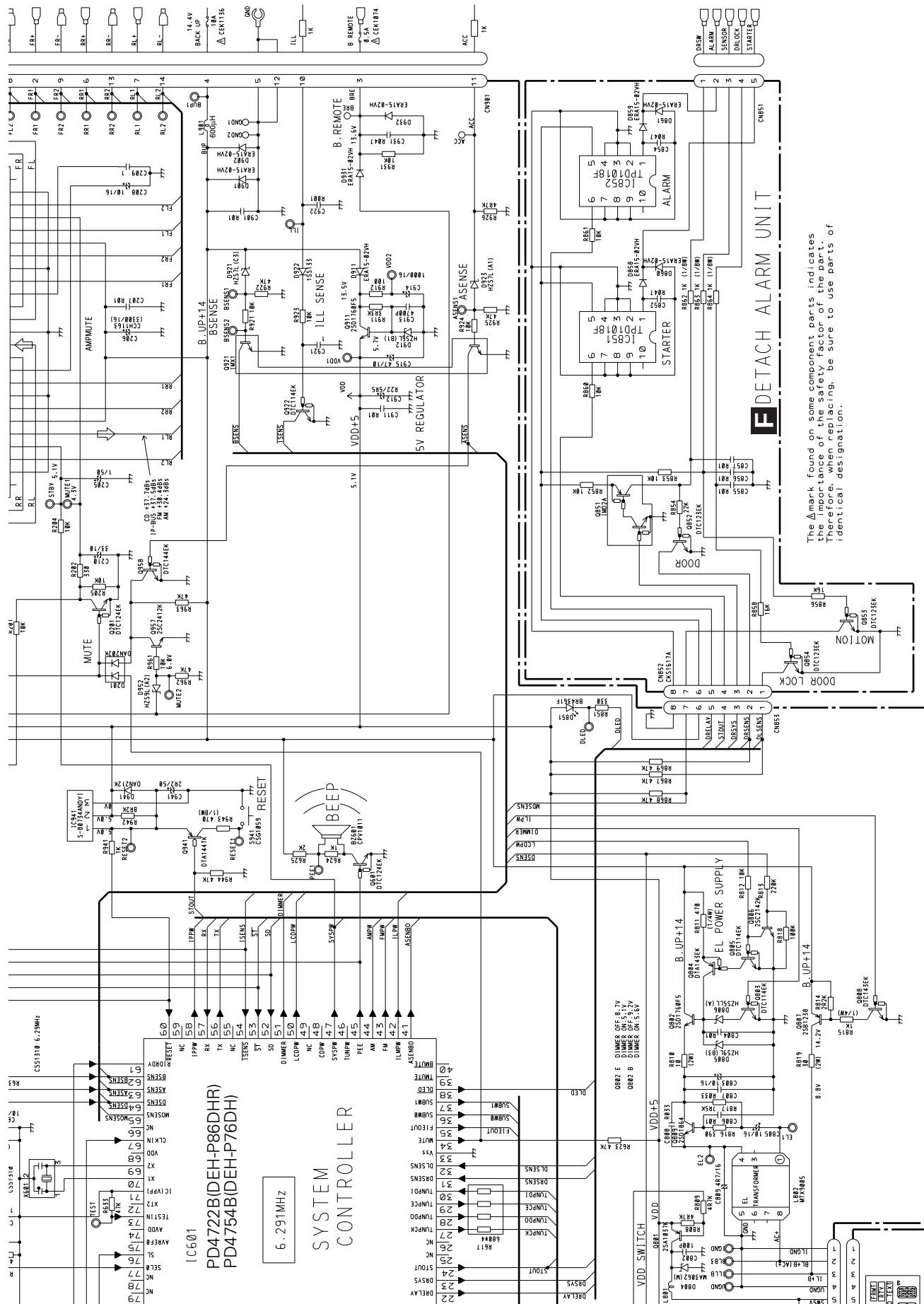






C





The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

DETACH ALARM UNIT

A-a A-b

A

B

C

D

**A-b**

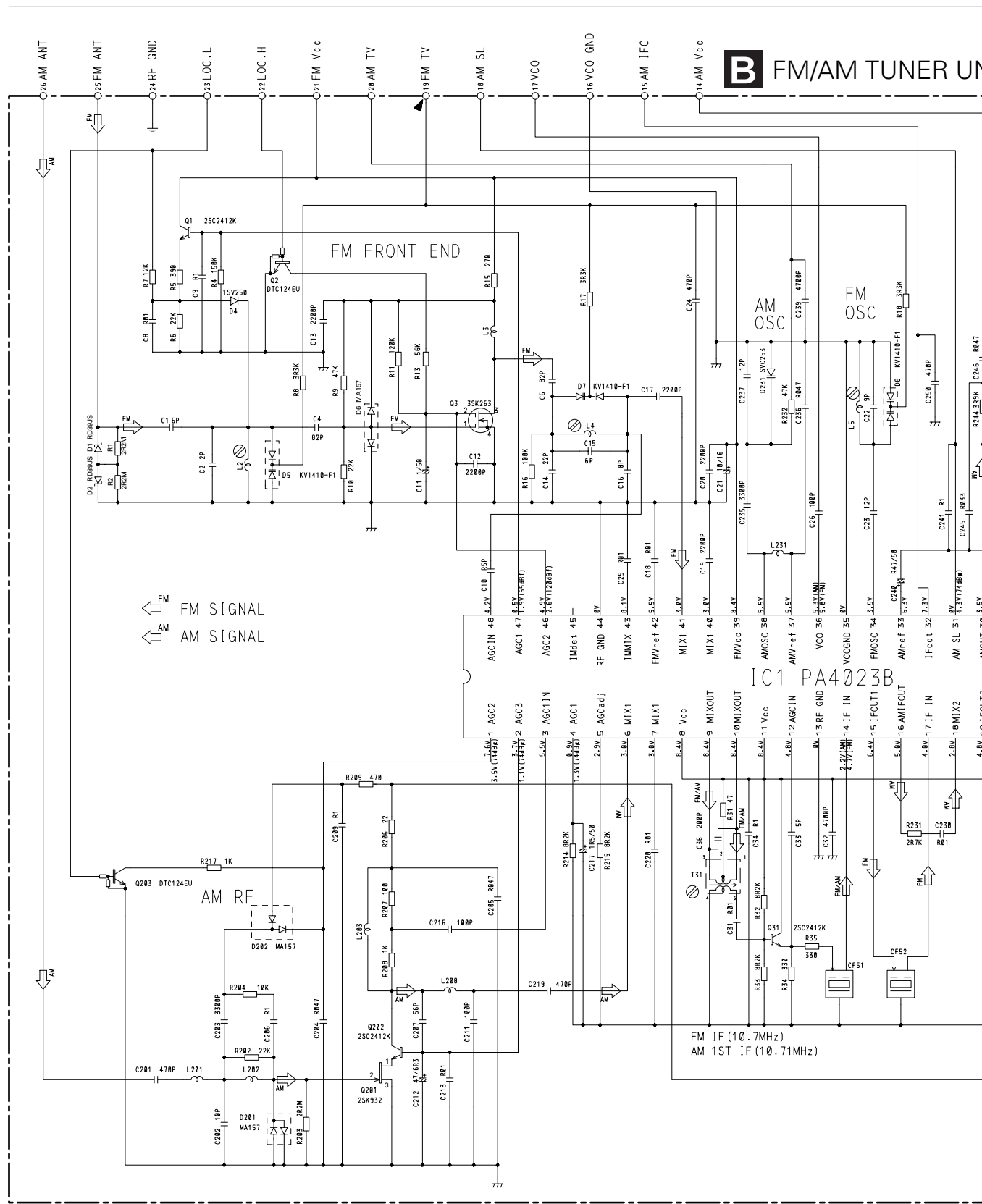
3.2 FM/AM TUNER UNIT(CWE1472)

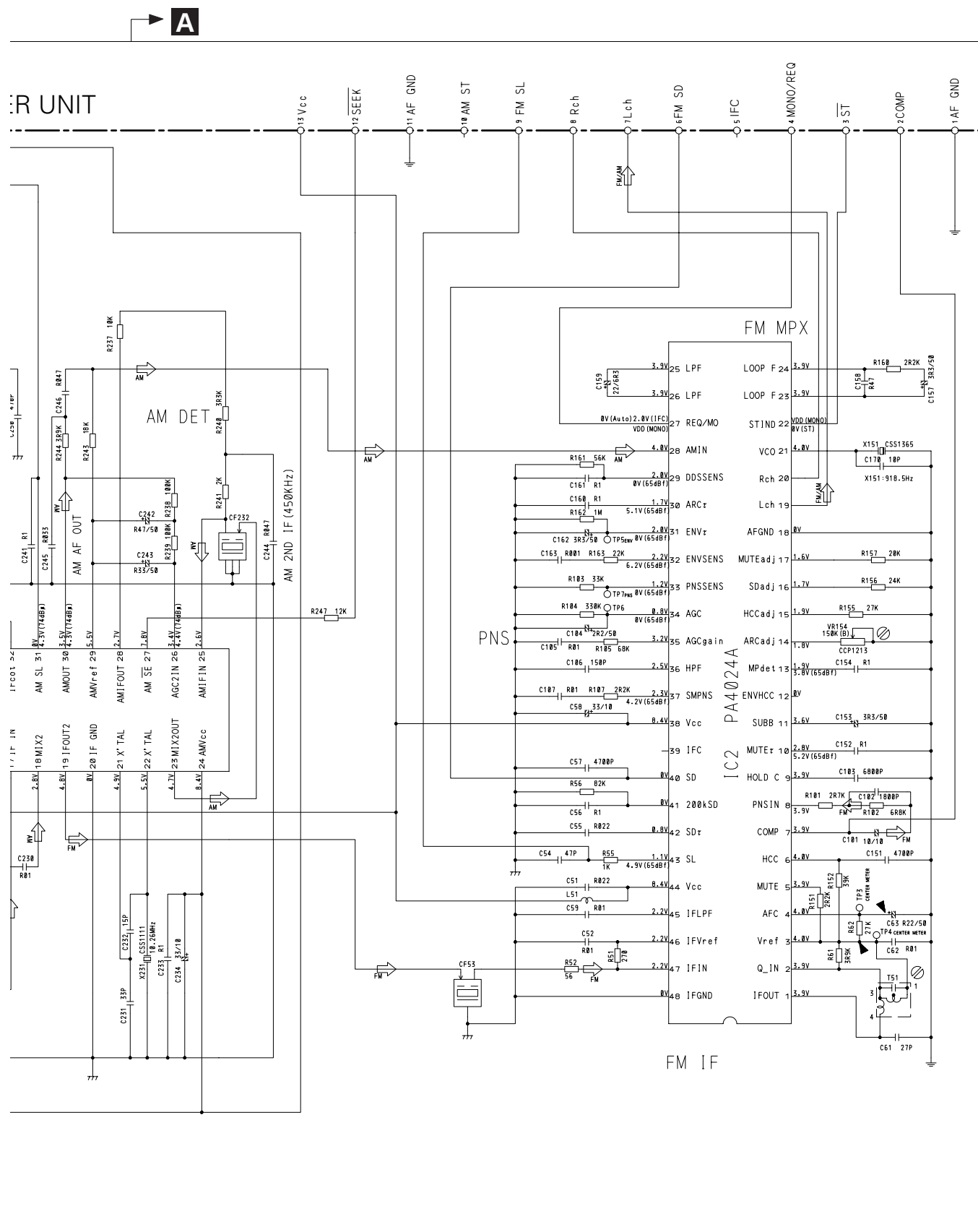
A

B

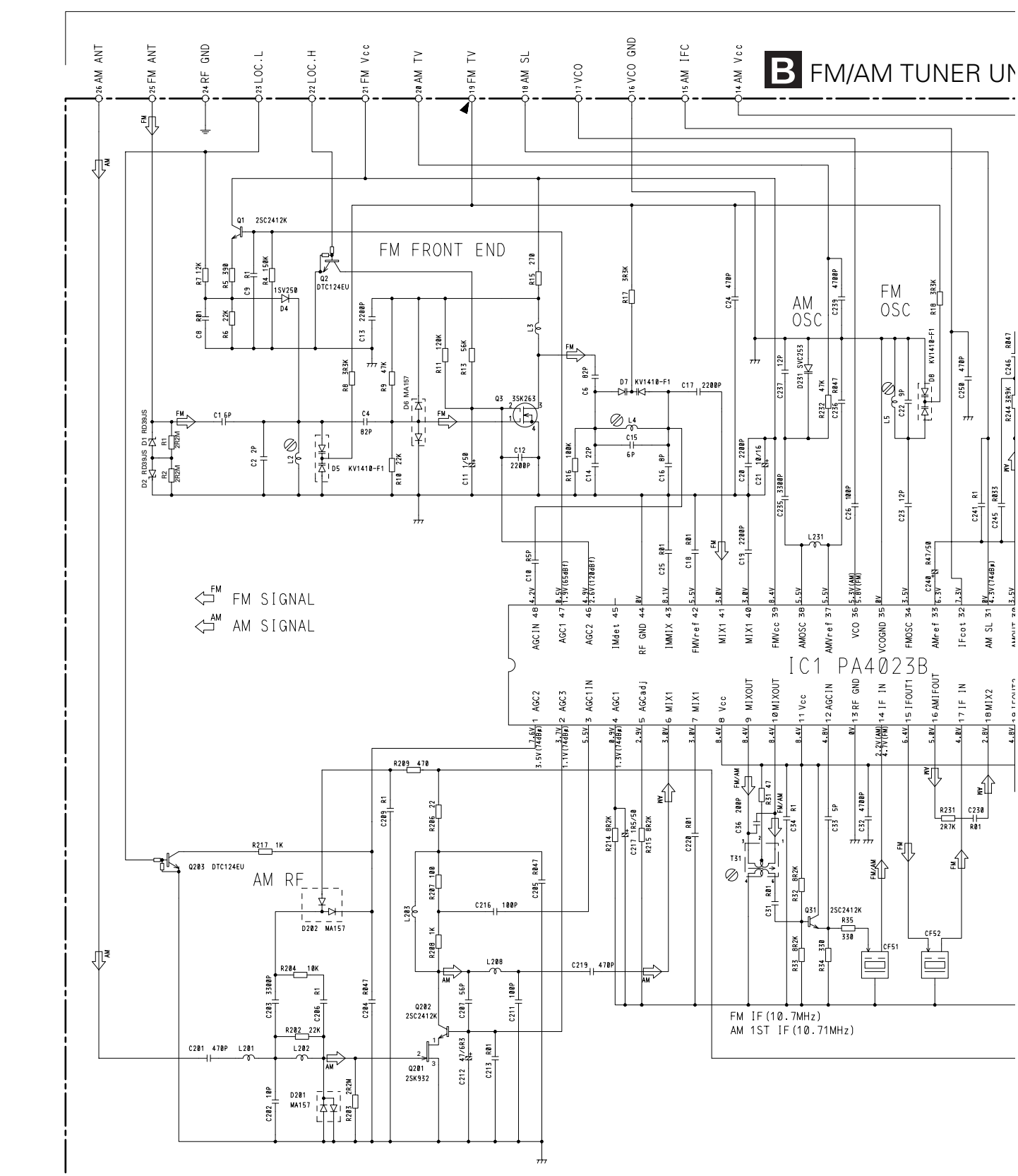
C

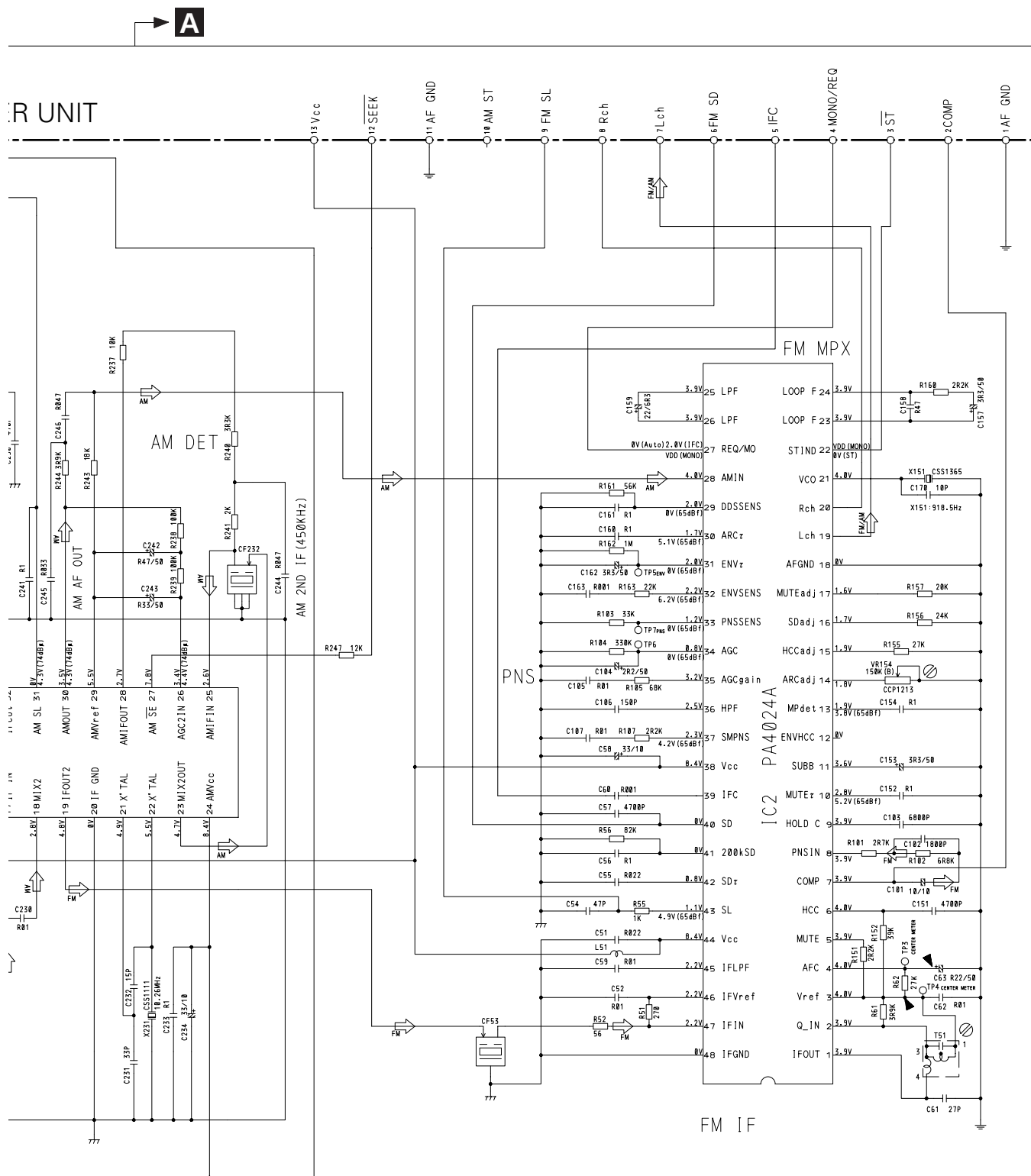
D





### 3.3 FM/AM TUNER UNIT(CWE1417)





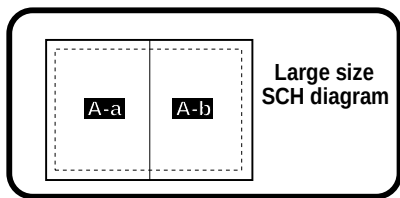
### 3.4 KEYBOARD UNIT



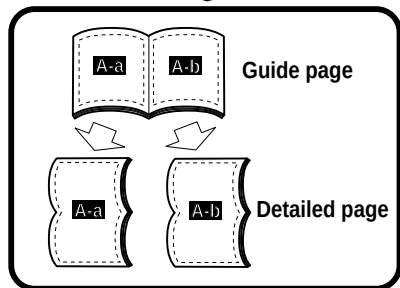


3.5 CD MECHANISM MODULE(GUIDE PAGE)

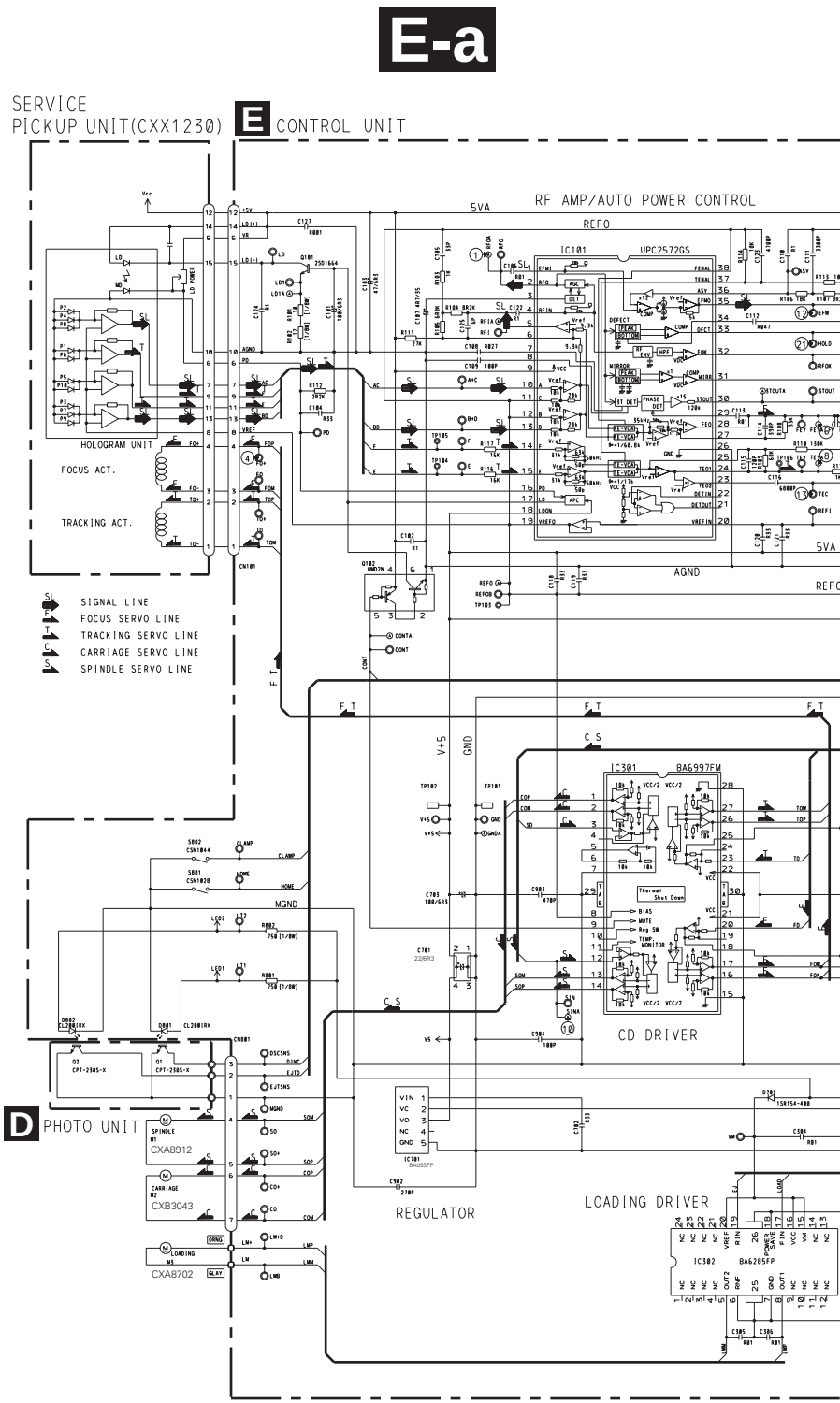
A



B



C



D

D PHOTO UNIT

SWITCHES:  
CONTROL UNIT  
S801-HOME SWITCH.....ON-OFF  
S802-CLAMP SWITCH.....ON-OFF  
The underlined indicates the switch position.

## B

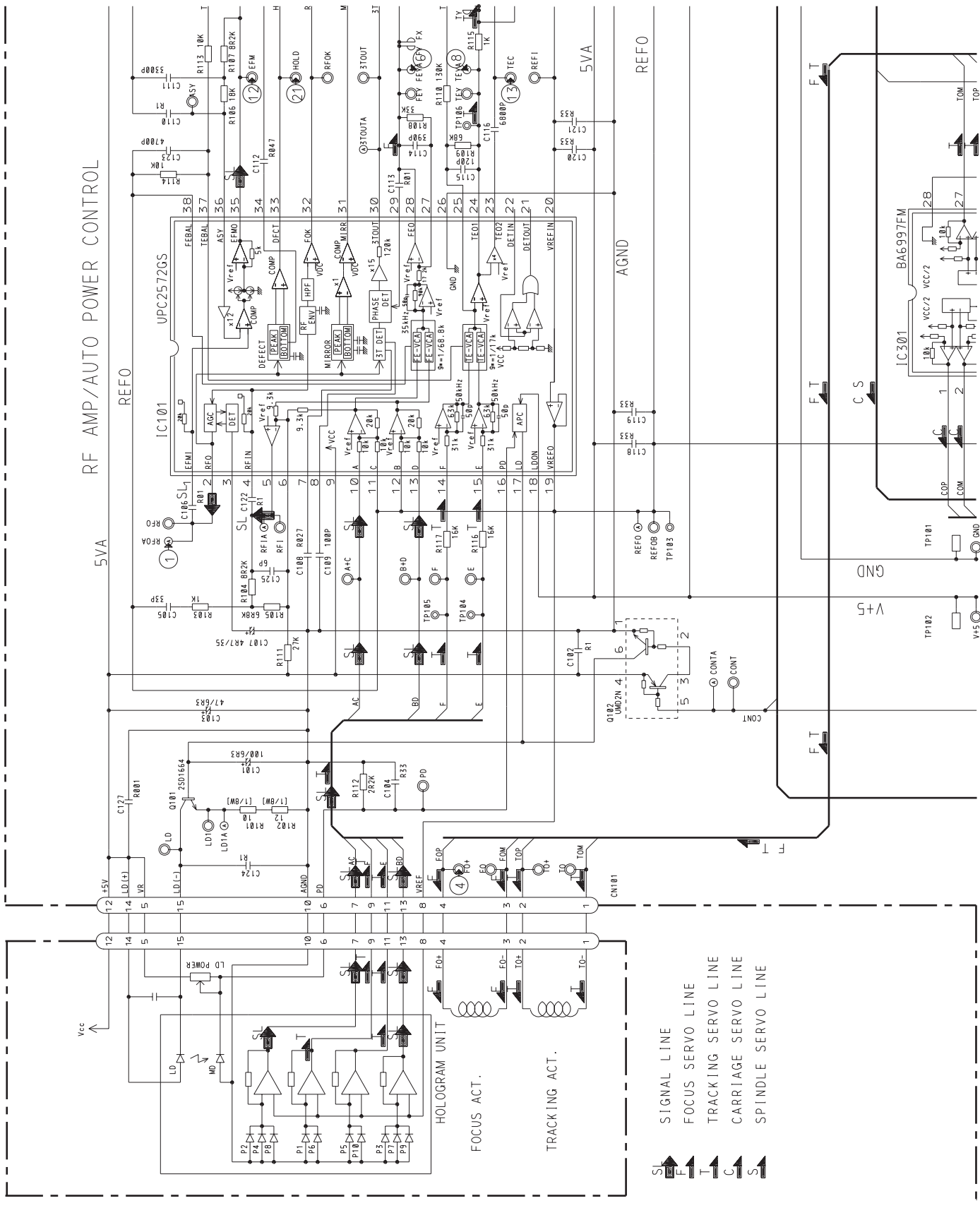


D

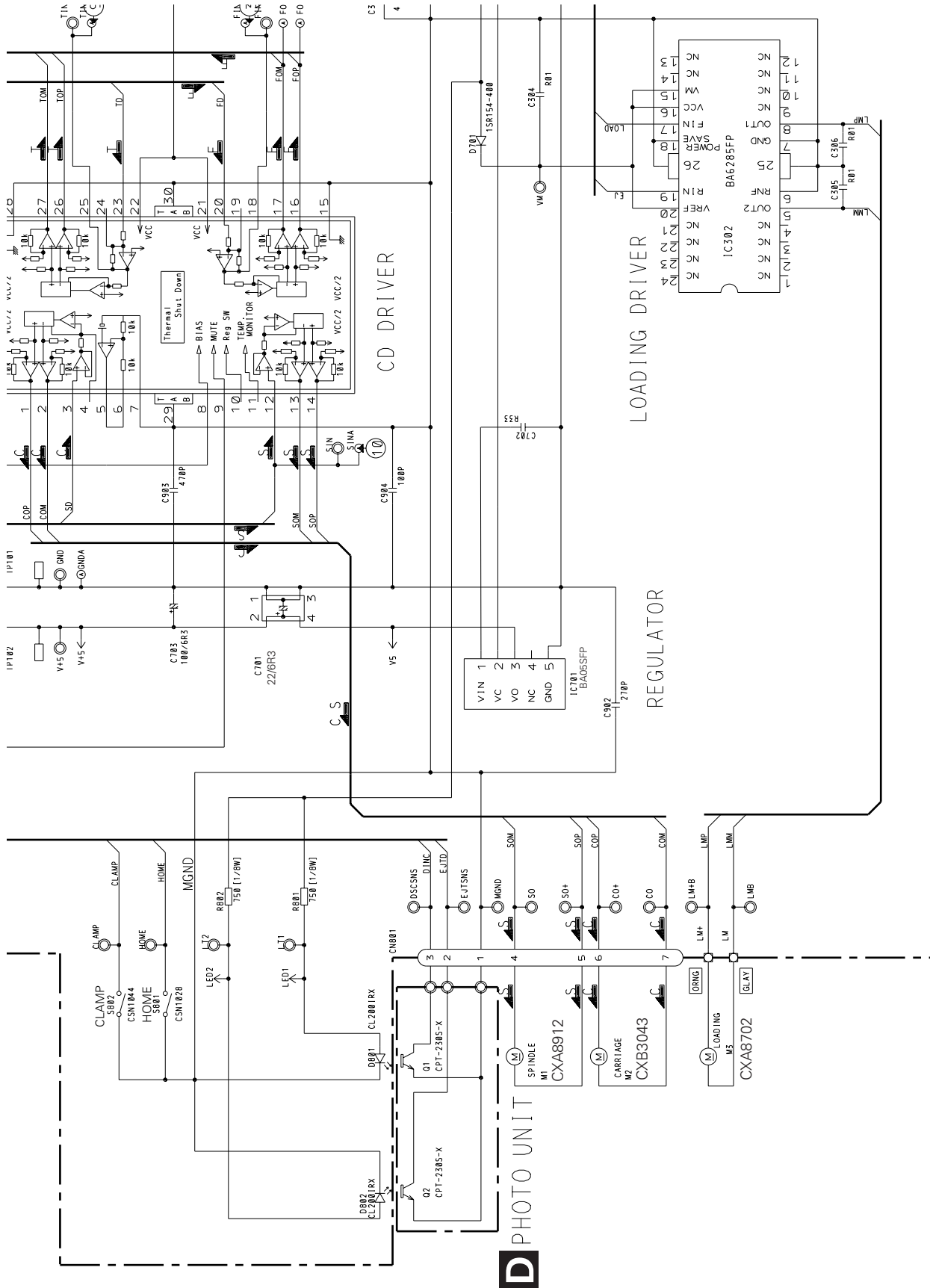
SERVICE PICKUP UNIT(CXX1230)

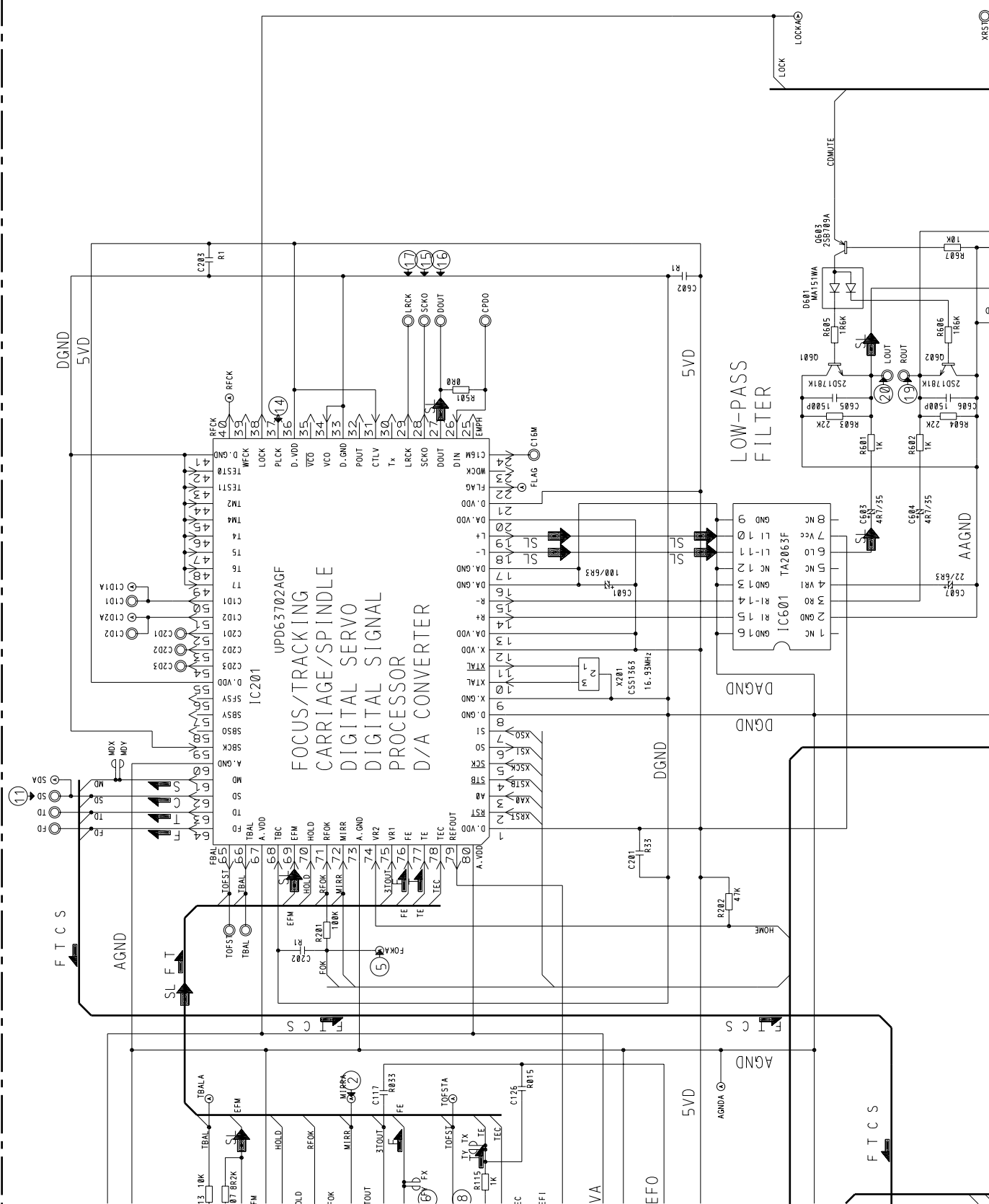
E-a E-b

E-a



- SIGNAL LINE
- FOCUS SERVO LINE
- TRACKING SERVO LINE
- CARRIAGE SERVO LINE
- SPINDLE SERVO LINE





A CN651

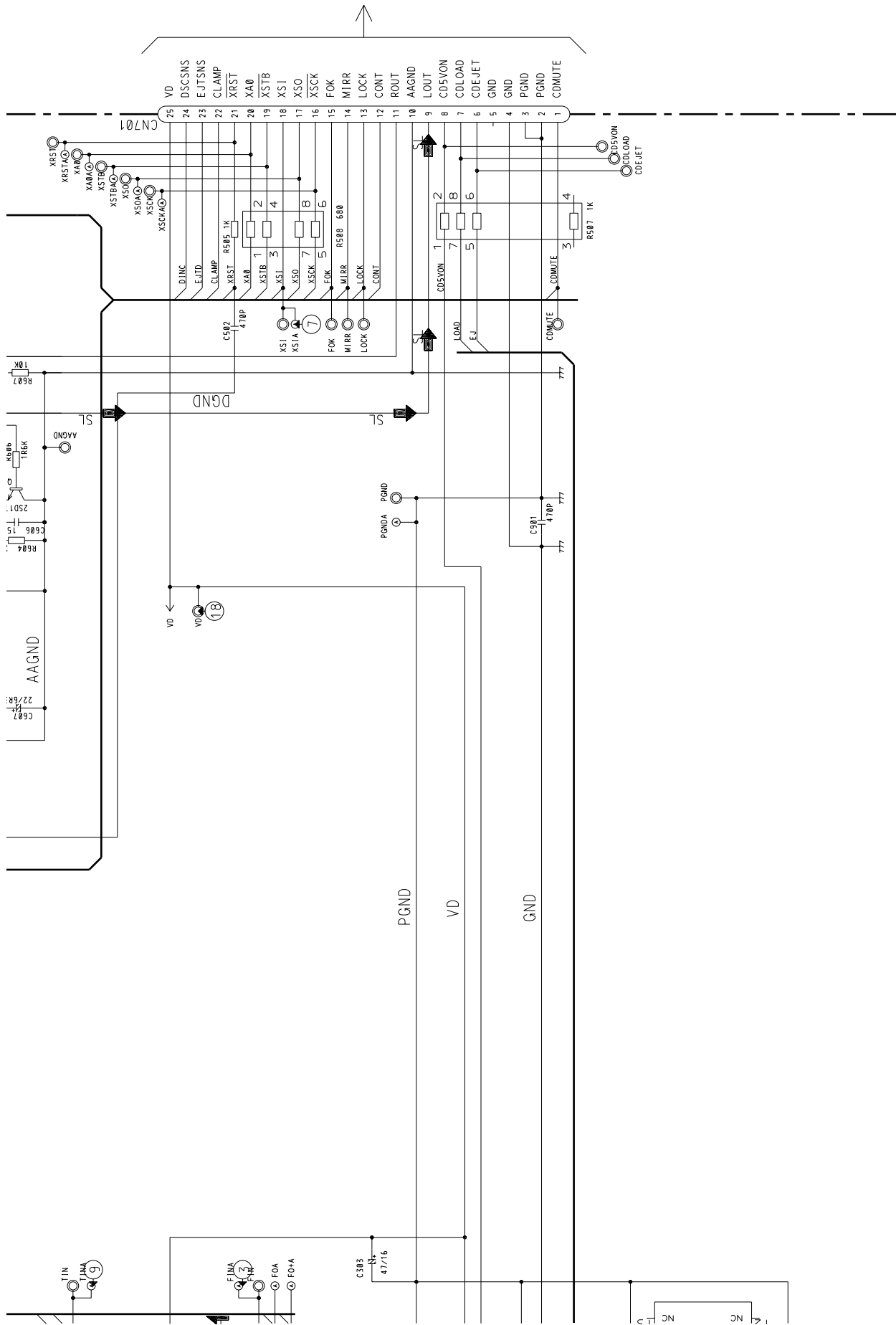
E-a E-b

A

B

C

D



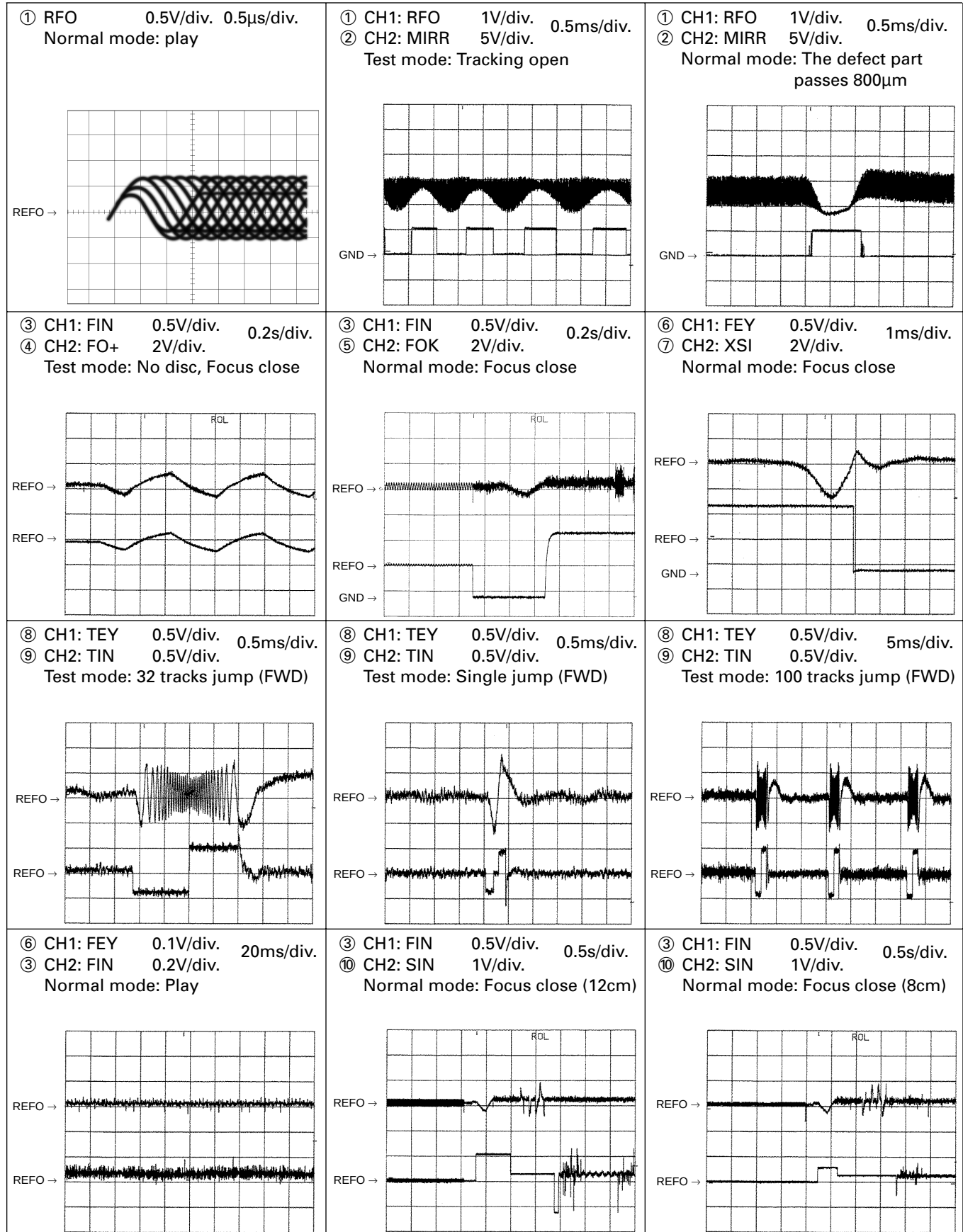
E-b

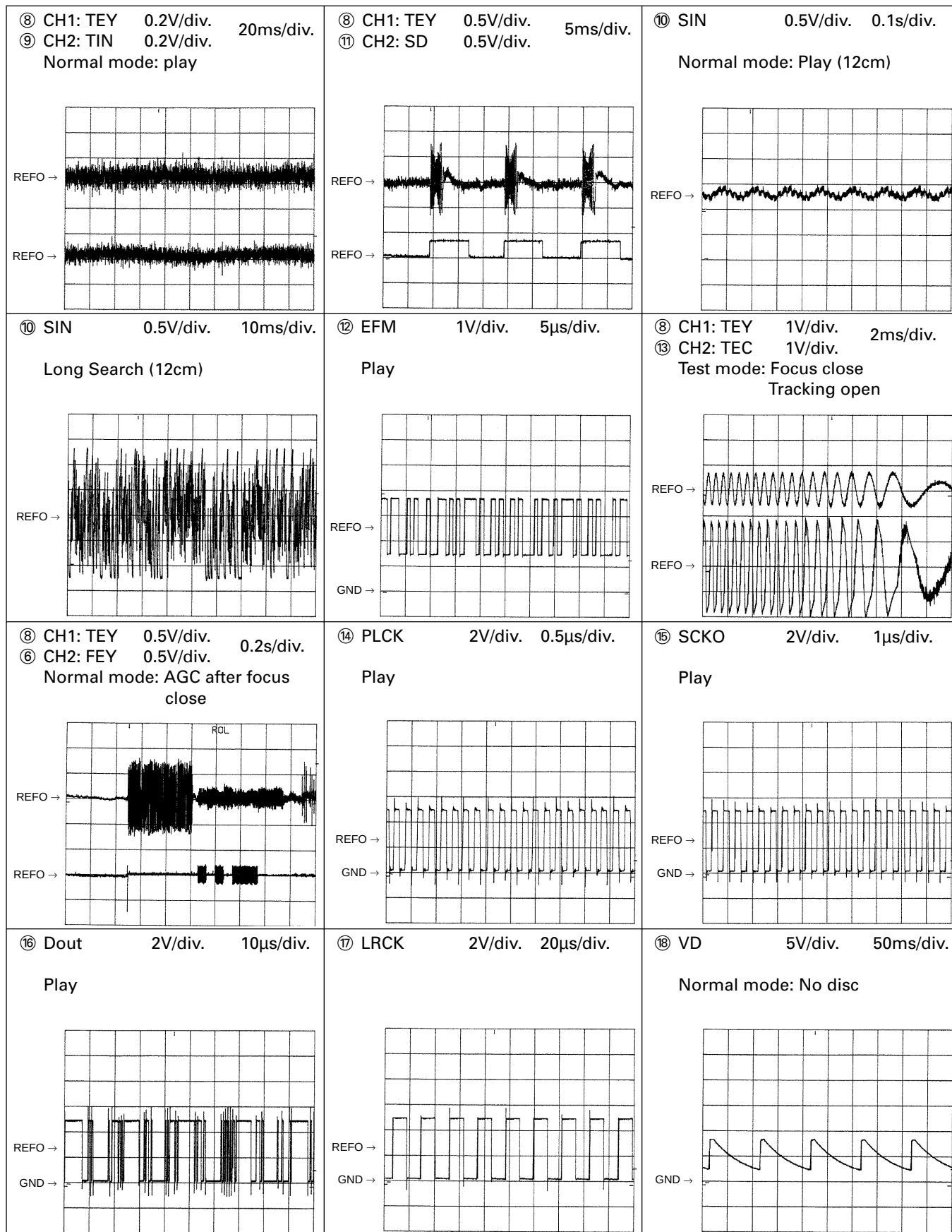
Note:1. The encircled numbers denote measuring pointes in the circuit diagram.

2. Reference voltage

REFO:2.5V

## ● Waveforms





|                                                                                                                                                             |                                                                                                                                                             |                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <div><div><div>⑱ CH1: R OUT 1V/div. 0.2ms/div.</div><div>⑳ CH2: L OUT 1V/div.</div><div>Normal mode: Play (1kHz 0dB)</div></div><div></div></div>           | <div><div><div>⑥ CH1: FEY 0.2V/div. 1ms/div.</div><div>③ CH2: FIN 0.5V/div.</div><div>Normal mode: During AGC</div></div><div></div></div>                  | <div><div><div>⑧ CH1: TEY 0.2V/div. 1ms/div.</div><div>⑨ CH2: TIN 0.5V/div.</div><div>Normal mode: During AGC</div></div><div></div></div> |
| <div><div><div>① CH1: RFO 1V/div. 0.5ms/div.</div><div>② CH2: HOLD 5V/div.</div><div>Normal mode: The defect part passes 800μm</div></div><div></div></div> | <div><div><div>③ CH1: FIN 1V/div. 0.5ms/div.</div><div>② CH2: HOLD 5V/div.</div><div>Normal mode: The defect part passes 800μm</div></div><div></div></div> |                                                                                                                                            |
|                                                                                                                                                             |                                                                                                                                                             |                                                                                                                                            |
|                                                                                                                                                             |                                                                                                                                                             |                                                                                                                                            |

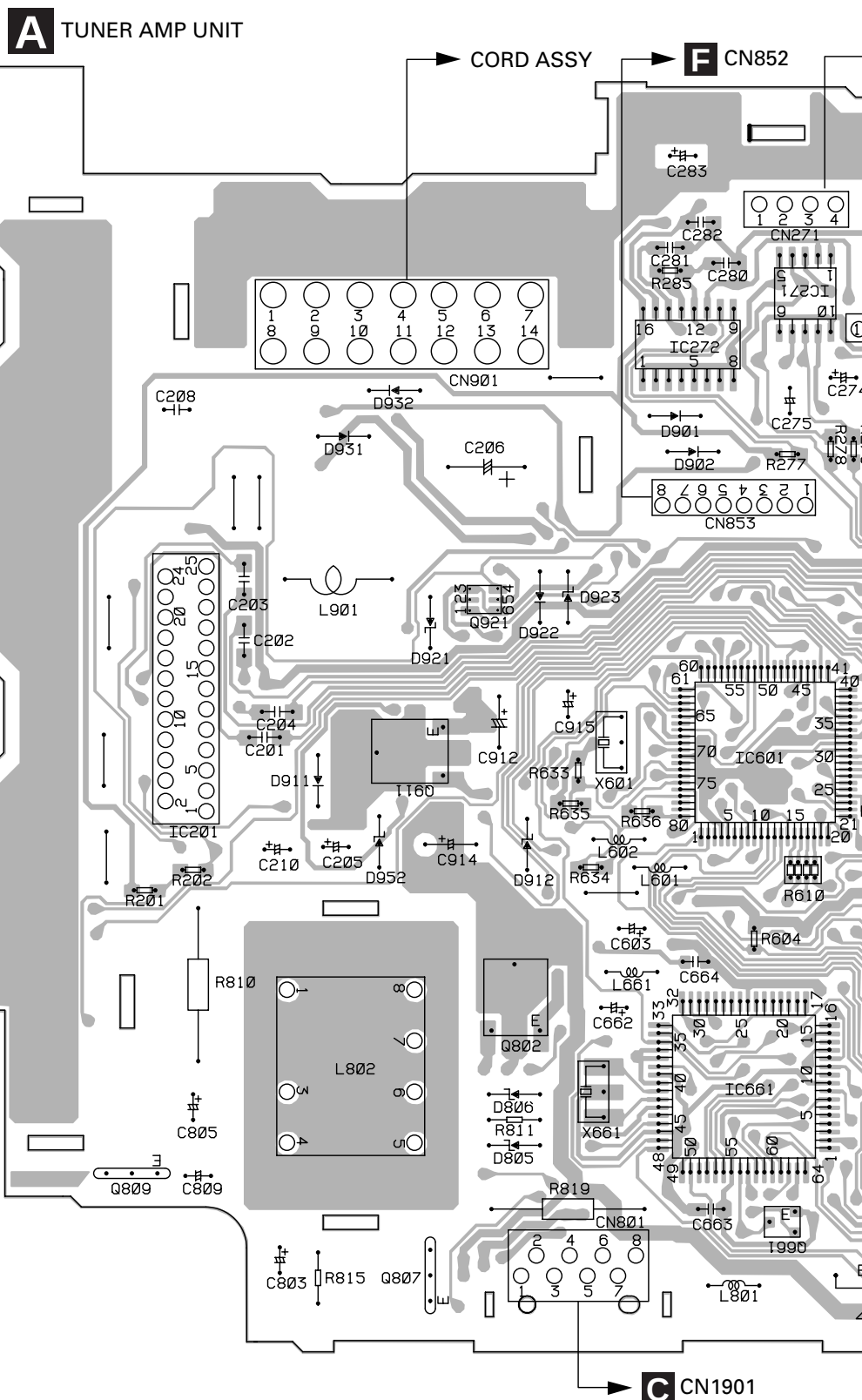
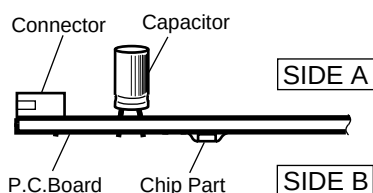


## 4. PCB CONNECTION DIAGRAM

### 4.1 TUNER AMP UNIT

#### NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.  
For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



B

C

D



IC271

Q101 IC102  
IC272 IC101

Q102

0052

Q956

Q951

Q251 Q252  
Q955

Q921 Q502

Q302  
IC151 Q954

TC601 Q301

Q911

IC201

IC701

IC751

Q802

IC661

Q809

Q661  
IC941 Q972  
Q807 Q971

**A** TUNER AMP UNIT

IC, Q

Q271  
IC273

Q501  
Q953

Q922  
Q253

Q958 IC501 Q957

Q803

Q805

IC731 Q201  
Q804

Q806

Q941

Q601 Q801

Q808

## SIDE B

A

B

C

D

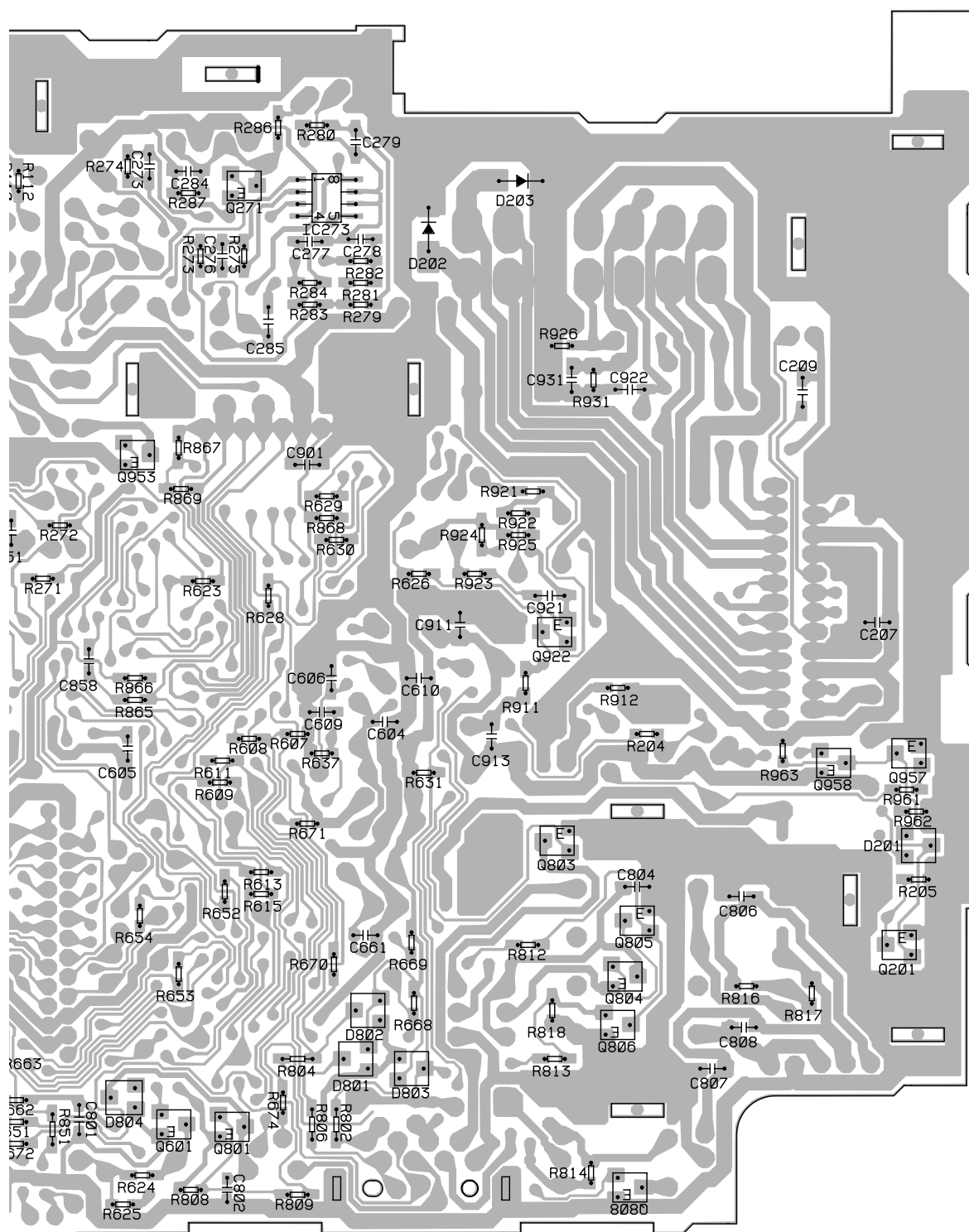
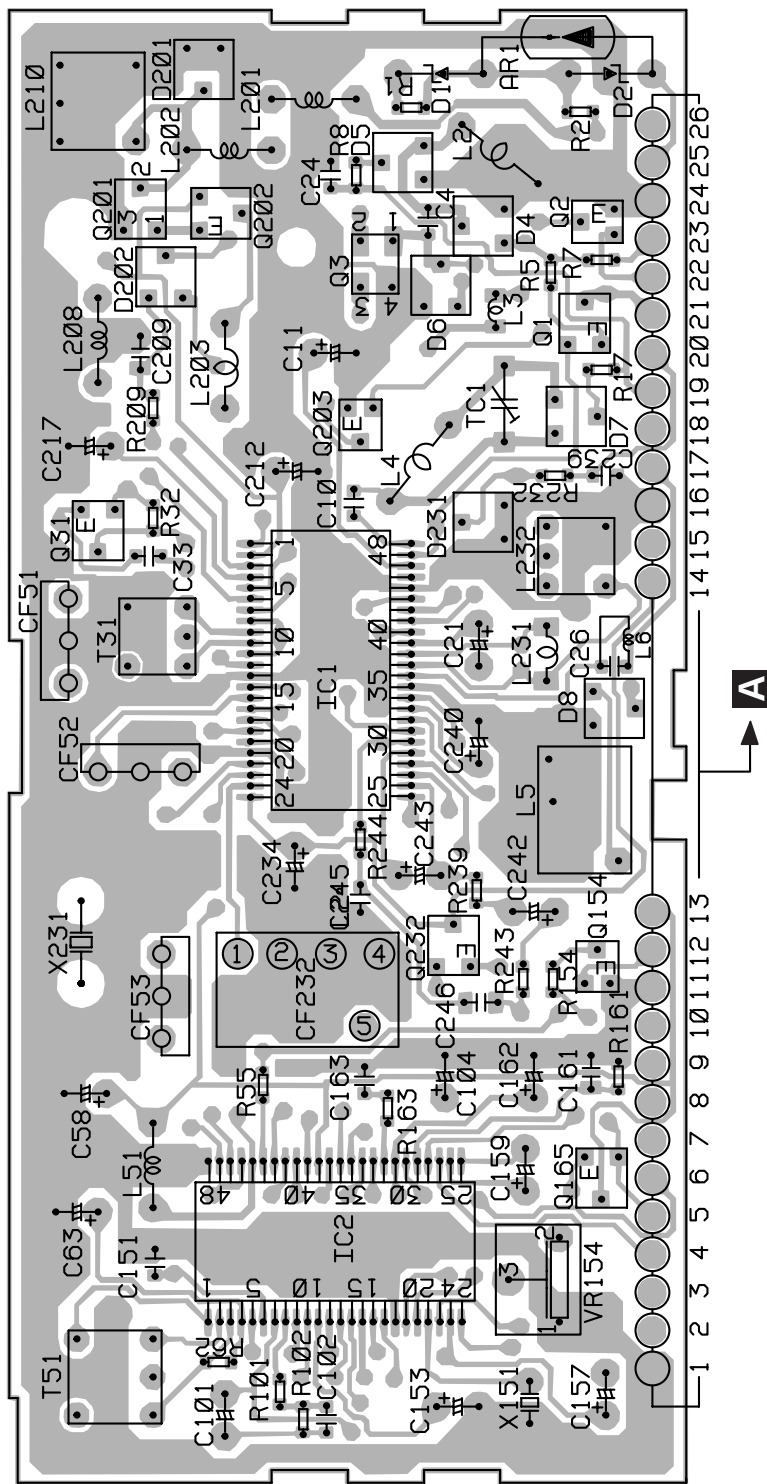
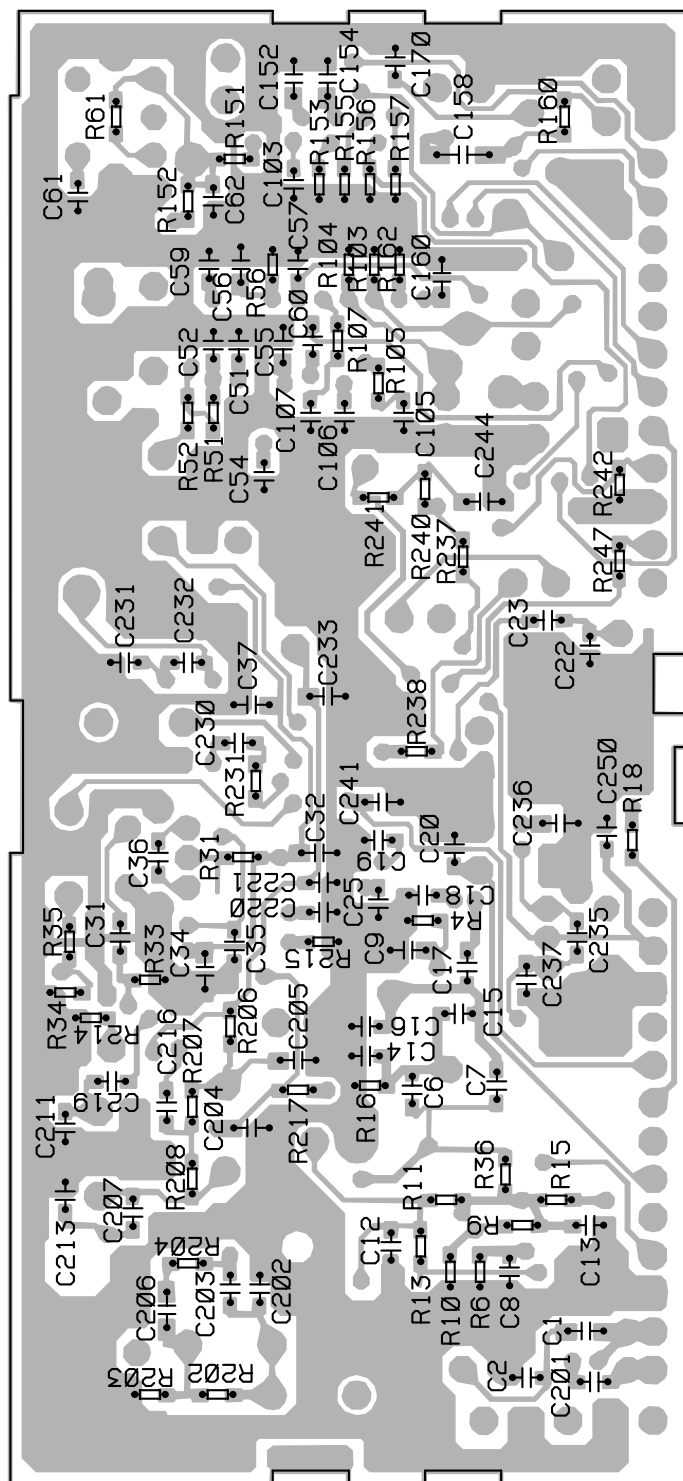


Fig. 16

**B**

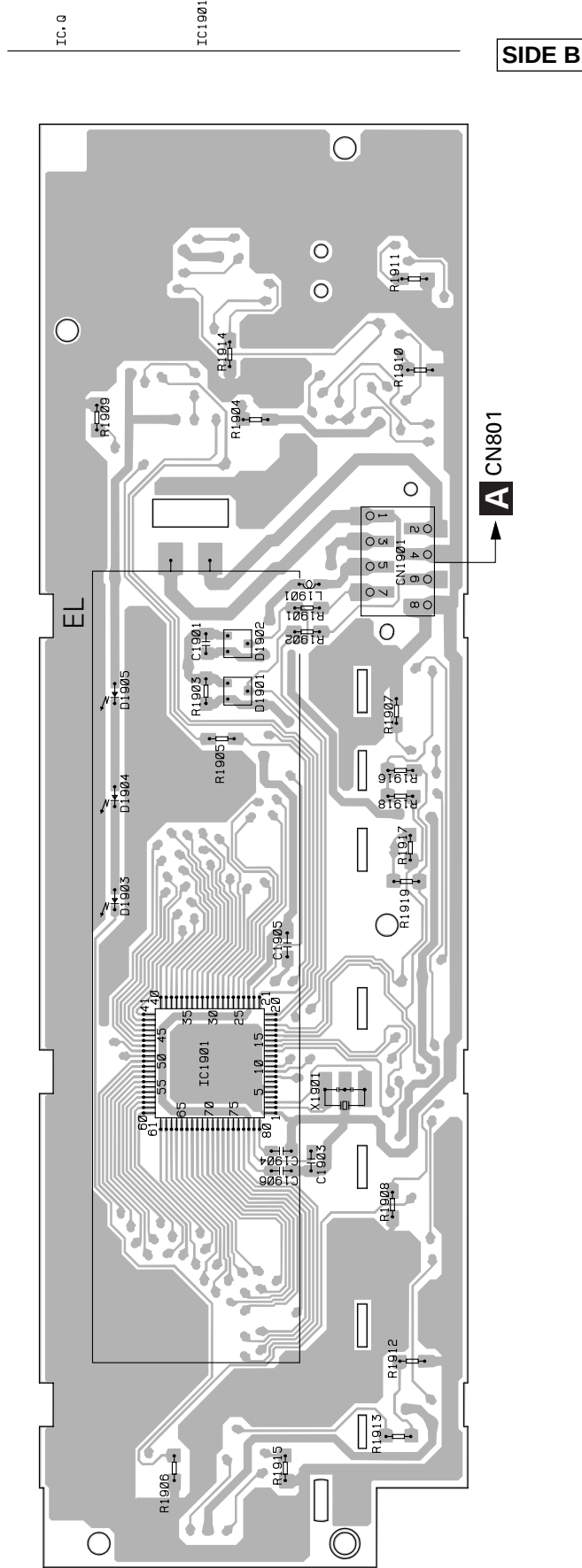
A



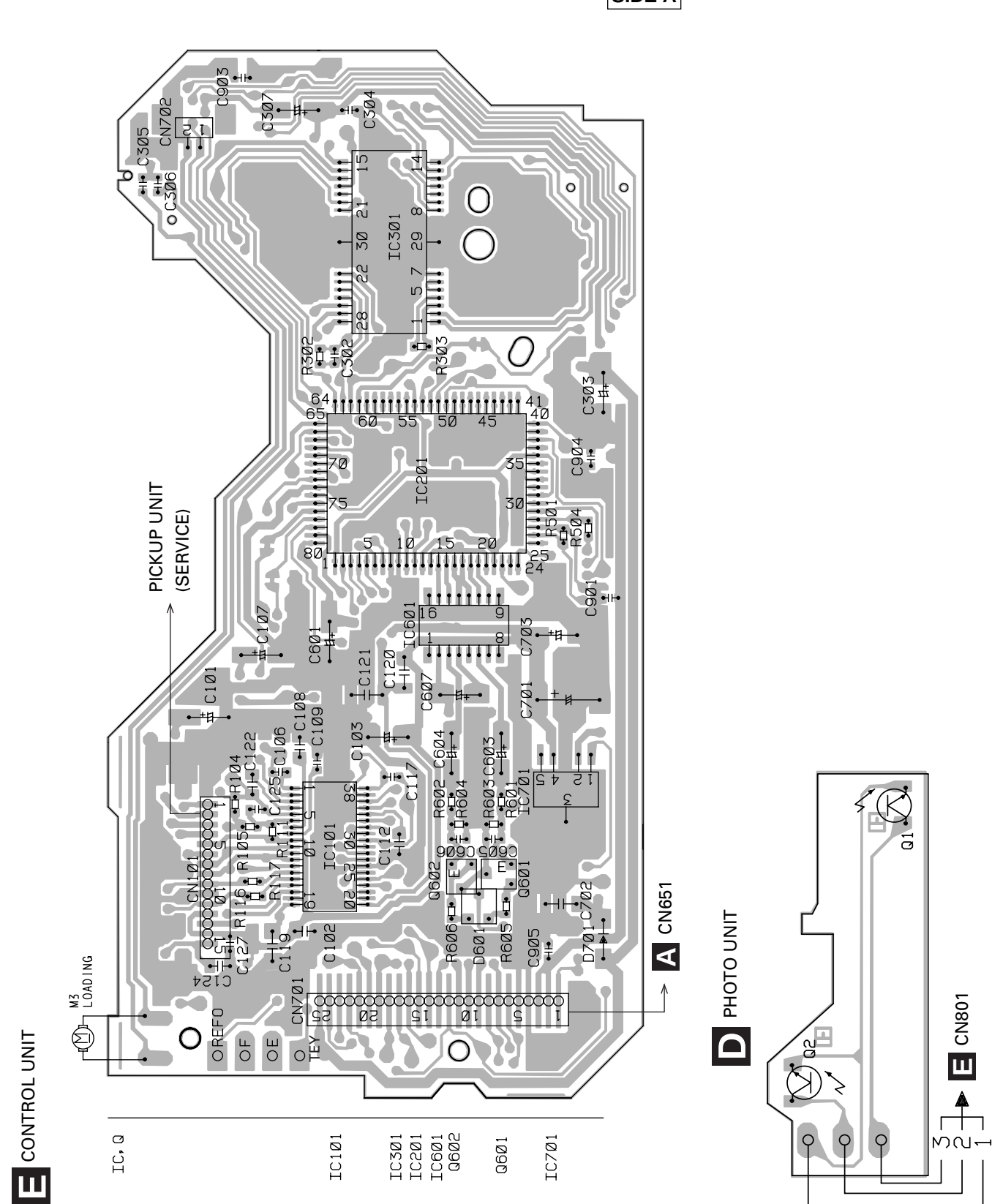
SIDE B

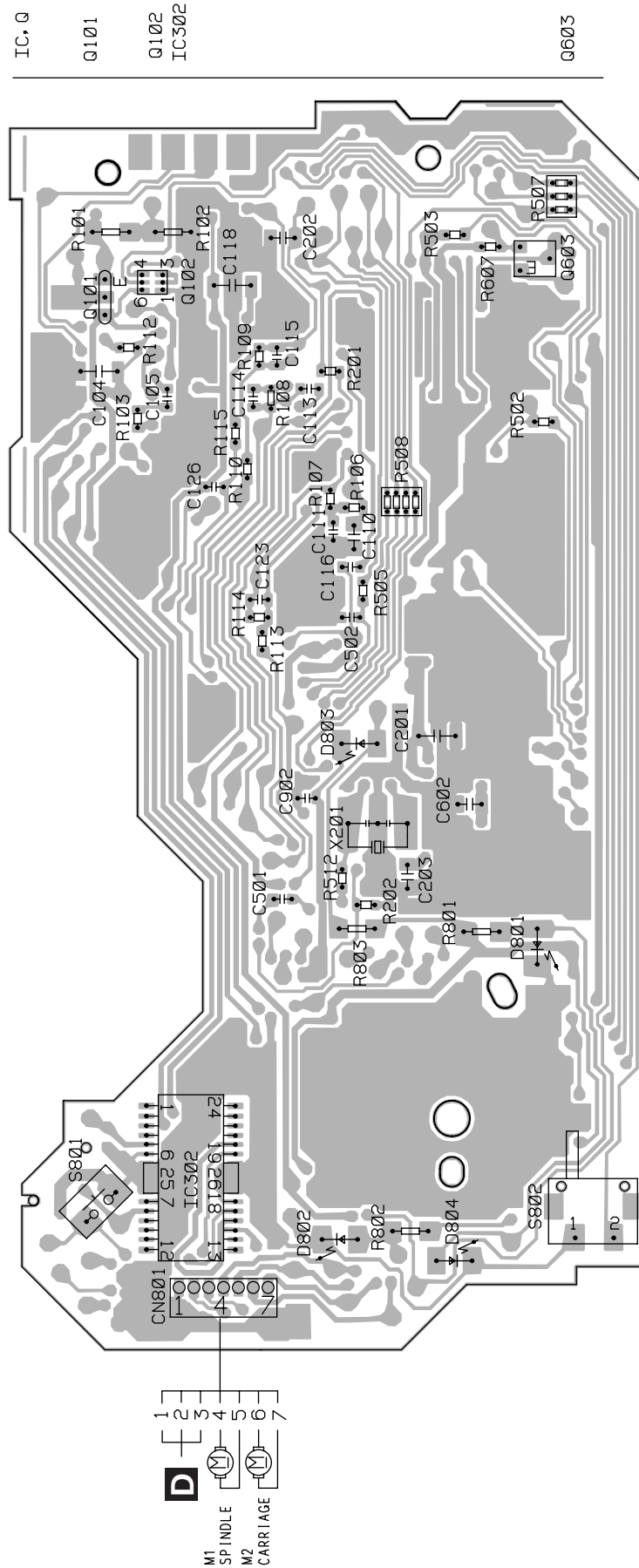


**C** KEYBOARD UNIT

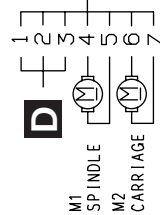


## CN801



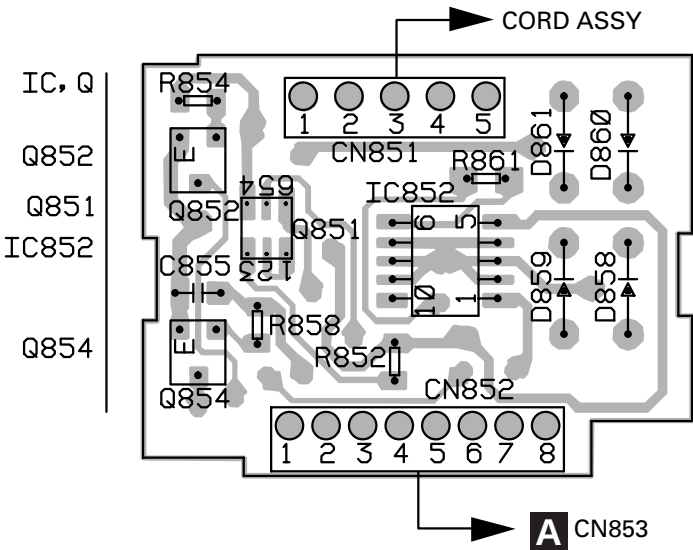


CONTROL UNIT

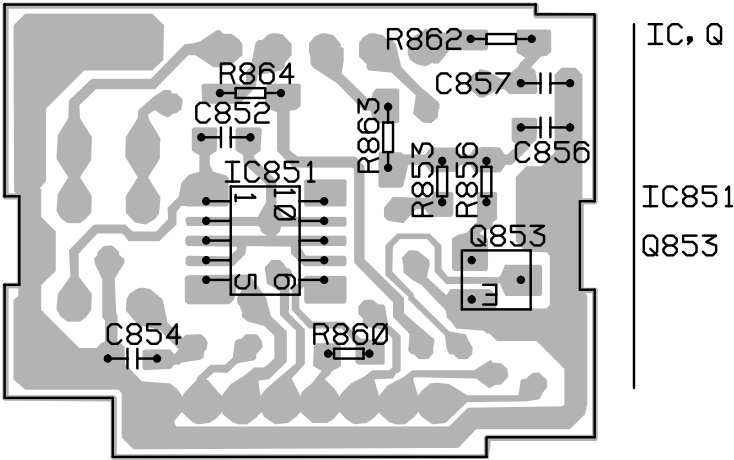


4.5 DETACH ALARM UNIT

**F** DETACH ALARM UNIT **SIDE A**



**F** DETACH ALARM UNIT **SIDE B**



## 5. ELECTRICAL PARTS LIST

### NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/OS○○○○J,RS1/○○S○○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

| ====Circuit Symbol and No. Part Name=====                                                                                                                 | Part No.     | ====Circuit Symbol & No. Part Name===== | Part No.    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------|-------------|
| <div> <div><b>B</b></div> <div> Unit Number : CWE1472 (DEH-P86DHR)<br/> Unit Number : CWE1417 (DEH-P76DH)<br/> Unit Name : FM/AM Tuner Unit </div> </div> |              | RESISTORS                               |             |
| MISCELLANEOUS                                                                                                                                             |              | R 1                                     | RS1/16S225J |
| IC 1 IC                                                                                                                                                   | PA4023B      | R 2                                     | RS1/16S225J |
| IC 2 IC                                                                                                                                                   | PA4024A      | R 4                                     | RS1/16S154J |
| Q 1 Transistor                                                                                                                                            | 2SC2412K     | R 5                                     | RS1/16S391J |
| Q 2 Transistor                                                                                                                                            | DTC124EU     | R 6                                     | RS1/16S223J |
| Q 3 FET                                                                                                                                                   | 3SK263       | R 7                                     | RS1/16S123J |
| Q 31 Transistor                                                                                                                                           | 2SC2412K     | R 8                                     | RS1/16S332J |
| Q 201 FET                                                                                                                                                 | 2SK932       | R 9                                     | RS1/16S473J |
| Q 202 Transistor                                                                                                                                          | 2SC2412K     | R 10                                    | RS1/16S223J |
| Q 203 Transistor                                                                                                                                          | DTC124EU     | R 11                                    | RS1/16S124J |
| D 1 Diode                                                                                                                                                 | RD39JS       | R 13                                    | RS1/16S563J |
| D 2 Diode                                                                                                                                                 | RD39JS       | R 15                                    | RS1/16S271J |
| D 4 Diode                                                                                                                                                 | 1SV250       | R 16                                    | RS1/16S104J |
| D 5 Diode                                                                                                                                                 | KV1410-F1    | R 17                                    | RS1/16S332J |
| D 6 Diode                                                                                                                                                 | MA157        | R 18                                    | RS1/16S332J |
| D 7 Diode                                                                                                                                                 | KV1410-F1    | R 31                                    | RS1/16S470J |
| D 8 Diode                                                                                                                                                 | KV1410-F1    | R 32                                    | RS1/16S822J |
| D 201 Diode                                                                                                                                               | MA157        | R 33                                    | RS1/16S822J |
| D 202 Diode                                                                                                                                               | MA157        | R 34                                    | RS1/16S331J |
| D 231 Diode                                                                                                                                               | SVC253       | R 35                                    | RS1/16S331J |
| L 2 Coil(DEH-P86DHR)                                                                                                                                      | CTC1126      | R 51                                    | RS1/16S271J |
| L 2 Coil(DEH-P76DH)                                                                                                                                       | CTC1108      | R 52                                    | RS1/16S560J |
| L 3 Inductor                                                                                                                                              | LCTB2R2K2125 | R 55                                    | RS1/16S102J |
| L 4 Coil(DEH-P86DHR)                                                                                                                                      | CTC1126      | R 56                                    | RS1/16S823J |
| L 4 Coil(DEH-P76DH)                                                                                                                                       | CTC1108      | R 61                                    | RS1/16S392J |
| L 5 Coil(DEH-P86DHR)                                                                                                                                      | CTC1125      | R 62                                    | RS1/16S273J |
| L 5 Coil(DEH-P76DH)                                                                                                                                       | CTC1107      | R 101                                   | RS1/16S272J |
| L 51 Ferri-Inductor                                                                                                                                       | LAU150K      | R 102                                   | RS1/16S682J |
| L 201 Ferri-Inductor                                                                                                                                      | LAU4R7K      | R 103                                   | RS1/16S333J |
| L 202 Ferri-Inductor                                                                                                                                      | LAU330K      | R 104                                   | RS1/16S334J |
| L 203 Inductor                                                                                                                                            | CTF1287      | R 105                                   | RS1/16S683J |
| L 208 Inductor                                                                                                                                            | LAU121K      | R 107                                   | RS1/16S222J |
| L 231 Inductor                                                                                                                                            | LCTA3R3J3225 | R 151                                   | RS1/16S222J |
| T 31 Coil                                                                                                                                                 | CTE1116      | R 152                                   | RS1/16S393J |
| T 51 Coil(DEH-P86DHR)                                                                                                                                     | CTC1159      | R 155                                   | RS1/16S273J |
| T 51 Coil(DEH-P76DH)                                                                                                                                      | CTC1136      | R 156                                   | RS1/16S243J |
| CF 51 Ceramic Filter(DEH-P86DHR)                                                                                                                          | CTF1442      | R 157                                   | RS1/16S203J |
| CF 51 Ceramic Filter(DEH-P76DH)                                                                                                                           | CTF1441      | R 160                                   | RS1/16S222J |
| CF 52 Ceramic Filter(DEH-P86DHR)                                                                                                                          | CTF1442      | R 161                                   | RS1/16S563J |
| CF 52 Ceramic Filter(DEH-P76DH)                                                                                                                           | CTF1441      | R 162                                   | RS1/16S105J |
| CF 53 Ceramic Filter(DEH-P86DHR)                                                                                                                          | CTF1442      | R 163                                   | RS1/16S223J |
| CF 53 Ceramic Filter(DEH-P76DH)                                                                                                                           | CTF1441      | R 202                                   | RS1/16S223J |
| CF 232 Ceramic Filter                                                                                                                                     | CTF1348      | R 203                                   | RS1/16S225J |
| X 151 Resonator 920.5kHz                                                                                                                                  | CSS1365      | R 204                                   | RS1/16S103J |
| X 231 Crystal Resonator 10.26MHz                                                                                                                          | CSS1111      | R 206                                   | RS1/16S220J |
| VR 154 Semi-fixed 150kΩ(B)                                                                                                                                | CCP1213      | R 207                                   | RS1/16S101J |
|                                                                                                                                                           |              | R 208                                   | RS1/16S102J |
|                                                                                                                                                           |              | R 209                                   | RS1/16S471J |
|                                                                                                                                                           |              | R 214                                   | RS1/16S822J |
|                                                                                                                                                           |              | R 215                                   | RS1/16S822J |

# DEH-P86DHR,P76DH

| ====Circuit Symbol and No. Part | Name=====   | Part No.     | ====Circuit Symbol and No. Part | Name===== | Part No.     |
|---------------------------------|-------------|--------------|---------------------------------|-----------|--------------|
| R 217                           |             | RS1/16S102J  | C 161                           |           | CKSQYB104K16 |
| R 231                           |             | RS1/16S272J  | C 162                           |           | CEJA3R3M50   |
| R 232                           |             | RS1/16S473J  | C 163                           |           | CKSRYB102K50 |
| R 237                           |             | RS1/16S103J  | C 170                           |           | CCSRCH100D50 |
| R 238                           |             | RS1/16S104J  | C 201                           |           | CCSRCH471J50 |
| R 239                           |             | RS1/16S104J  | C 202                           |           | CCSRCH100D50 |
| R 240                           |             | RS1/16S332J  | C 203                           |           | CKSRYB332K50 |
| R 241                           |             | RS1/16S202J  | C 204                           |           | CKSQYB473K16 |
| R 243                           |             | RS1/16S183J  | C 205                           |           | CKSQYB473K16 |
| R 244                           |             | RS1/16S392J  | C 206                           |           | CKSQYB104K16 |
| R 247                           |             | RS1/16S123J  | C 207                           |           | CCSRCH560J50 |
| CAPACITORS                      |             |              | C 209                           |           | CKSQYB104K16 |
| C 1                             |             | CCSQCH6R0D50 | C 211                           |           | CCSRCH101J50 |
| C 2                             |             | CCSRCK2R0C50 | C 212                           |           | CEJA470M6R3  |
| C 4                             |             | CCSRCH820J50 | C 213                           |           | CKSRYB103K25 |
| C 6                             |             | CCSRCH820J50 | C 216                           |           | CCSRCH101J50 |
| C 8                             |             | CKSRYB103K25 | C 217                           |           | CEJA1R5M50   |
| C 9                             |             | CKSQYB104K16 | C 219                           |           | CCSRCH471J50 |
| C 10                            |             | CCSRCKR50C50 | C 220                           |           | CKSRYB103K25 |
| C 11                            |             | CEJA1R0M50   | C 230                           |           | CKSRYB103K25 |
| C 12                            |             | CKSRYB222K50 | C 231                           |           | CCSRCH330J50 |
| C 13                            |             | CKSRYB222K50 | C 232                           |           | CCSRCH150J50 |
| C 14                            |             | CCSRCH220J50 | C 233                           |           | CKSQYB104K16 |
| C 15                            |             | CCSRCH6R0D50 | C 234                           |           | CEJA330M10   |
| C 16                            |             | CCSRCH8R0D50 | C 235                           |           | CKSRYB332K50 |
| C 17                            |             | CKSRYB222K50 | C 236                           |           | CKSQYB473K16 |
| C 18                            |             | CKSRYB103K25 | C 237                           |           | CCSRCH120J50 |
| C 19                            |             | CKSRYB222K50 | C 239                           |           | CKSRYB472K50 |
| C 20                            |             | CKSRYB222K50 | C 240                           |           | CEJAR47M50   |
| C 21                            |             | CEJA100M16   | C 241                           |           | CKSQYB104K16 |
| C 22                            |             | CCSRTH9R0D50 | C 242                           |           | CEJAR47M50   |
| C 23                            |             | CCSRTH120J50 | C 243                           |           | CEJAR33M50   |
| C 24                            |             | CCSRCH471J50 | C 244                           |           | CKSQYB473K16 |
| C 25                            |             | CKSRYB103K25 | C 245                           |           | CKSRYB333K16 |
| C 26                            |             | CCSRCH101J50 | C 246                           |           | CKSQYB473K16 |
| C 31                            |             | CKSRYB103K25 | C 250                           |           | CCSRCH471J50 |
| C 32                            |             | CKSQYB472K50 |                                 |           |              |
| C 33                            |             | CCSRCH5R0C50 |                                 |           |              |
| C 34                            |             | CKSQYB104K16 |                                 |           |              |
| C 36                            |             | CCSRRH201J50 |                                 |           |              |
| C 51                            |             | CKSRYB223K25 |                                 |           |              |
| C 52                            |             | CKSRYB103K25 |                                 |           |              |
| C 54                            |             | CCSRCH470J50 |                                 |           |              |
| C 55                            |             | CKSQYB223K25 |                                 |           |              |
| C 56                            |             | CKSQYB104K16 |                                 |           |              |
| C 57                            |             | CKSRYB472K50 |                                 |           |              |
| C 58                            |             | CEJA330M10   |                                 |           |              |
| C 59                            |             | CKSRYB103K25 |                                 |           |              |
| C 60                            | (DEH-P76DH) | CKSRYB102K50 |                                 |           |              |
| C 61                            |             | CCSRCH270J50 |                                 |           |              |
| C 62                            |             | CKSRYB103K25 |                                 |           |              |
| C 63                            |             | CEJAR22M50   |                                 |           |              |
| C 101                           |             | CEJANP100M10 |                                 |           |              |
| C 102                           |             | CKSRYB182K50 |                                 |           |              |
| C 103                           |             | CKSRYB682K25 |                                 |           |              |
| C 104                           |             | CEJA2R2M50   |                                 |           |              |
| C 105                           |             | CKSRYB103K25 |                                 |           |              |
| C 106                           |             | CCSRCH151J50 |                                 |           |              |
| C 107                           |             | CKSRYB103K25 |                                 |           |              |
| C 151                           |             | CKSRYB472K50 |                                 |           |              |
| C 152                           |             | CKSQYB104K16 |                                 |           |              |
| C 153                           |             | CEJA3R3M50   |                                 |           |              |
| C 154                           |             | CKSQYB104K16 |                                 |           |              |
| C 157                           |             | CEJA3R3M50   |                                 |           |              |
| C 158                           |             | CKSYB474K16  |                                 |           |              |
| C 159                           |             | CEJA220M6R3  |                                 |           |              |
| C 160                           |             | CKSQYB104K16 |                                 |           |              |

**E** Unit Number : CWX2268  
Unit Name : Control Unit

## MISCELLANEOUS

|        |                            |             |
|--------|----------------------------|-------------|
| IC 101 | IC                         | UPC2572GS   |
| IC 201 | IC                         | UPD63702AGF |
| IC 301 | IC                         | BA6997FM    |
| IC 302 | IC                         | BA6285FP    |
| IC 601 | IC                         | TA2063F     |
| IC 701 | IC                         | BA05SFP     |
| Q 101  | Transistor                 | 2SD1664     |
| Q 102  | Transistor                 | MA151WA     |
| Q 601  | Transistor                 | 2SD1781K    |
| Q 602  | Transistor                 | 2SD1781K    |
| Q 603  | Transistor                 | 2SB709A     |
| D 601  | Diode                      | MA151WA     |
| D 701  | Diode                      | 1SR154-400  |
| D 801  | Chip LED                   | CL200IRX    |
| D 802  | Chip LED                   | CL200IRX    |
| X 201  | Ceramic Resonator 16.93MHz | CSS1363     |
| S 801  | Switch (Home)              | CSN1028     |
| S 802  | Spring Switch (Clamp)      | CSN1044     |

## RESISTORS

|       |             |
|-------|-------------|
| R 101 | RS1/8S100J  |
| R 102 | RS1/8S120J  |
| R 103 | RS1/16S102J |
| R 104 | RS1/16S822J |
| R 105 | RS1/16S682J |

| ====Circuit Symbol and No. Part Name===== | Part No.     | ====Circuit Symbol and No. Part Name=====                                    | Part No.            |
|-------------------------------------------|--------------|------------------------------------------------------------------------------|---------------------|
| R 106                                     | RS1/16S183J  | C 605                                                                        | CKSRYB152K50        |
| R 107                                     | RS1/16S822J  | C 606                                                                        | CKSRYB152K50        |
| R 108                                     | RS1/16S333J  | C 607                                                                        | CEV220M6R3          |
| R 109                                     | RS1/16S683J  | C 701                                                                        | CCH1300             |
| R 110                                     | RS1/16S134J  | C 702                                                                        | CKSYB334K16         |
| R 111                                     | RS1/16S273J  | C 703                                                                        | CEV101M6R3          |
| R 112                                     | RS1/16S222J  | C 901                                                                        | CCSRCH471J50        |
| R 113                                     | RS1/16S103J  | C 902                                                                        | CCSRCH271J50        |
| R 114                                     | RS1/16S103J  | C 903                                                                        | CCSRCH471J50        |
| R 115                                     | RS1/16S102J  | C 904                                                                        | CCSRCH101J50        |
| R 116                                     | RS1/16S163J  | <div>F</div> Unit Number : CWM5291<br>Unit Name : Detach Alarm Unit          |                     |
| R 117                                     | RS1/16S163J  |                                                                              |                     |
| R 201                                     | RS1/16S104J  |                                                                              |                     |
| R 202                                     | RS1/16S473J  |                                                                              |                     |
| R 501                                     | RS1/16S0R0J  |                                                                              |                     |
| MISCELLANEOUS                             |              |                                                                              |                     |
| R 505                                     | RS1/16S102J  | IC 851                                                                       | IC TPD1018F         |
| R 507                                     | RA3C102J     | IC 852                                                                       | IC TPD1018F         |
| R 508                                     | RA4C681J     | Q 851                                                                        | Transistor IMD2A    |
| R 601                                     | RS1/16S102J  | Q 852                                                                        | Transistor DTC123EK |
| R 602                                     | RS1/16S102J  | Q 853                                                                        | Transistor DTC123EK |
| R 603                                     | RS1/16S223J  | Q 854                                                                        | Transistor DTC123EK |
| R 604                                     | RS1/16S223J  | D 858                                                                        | Diode ERA15-02VH    |
| R 605                                     | RS1/16S162J  | D 859                                                                        | Diode ERA15-02VH    |
| R 606                                     | RS1/16S162J  | D 860                                                                        | Diode ERA15-02VH    |
| R 607                                     | RS1/16S103J  | D 861                                                                        | Diode ERA15-02VH    |
| R 801                                     | RS1/8S751J   | RESISTORS                                                                    |                     |
| R 802                                     | RS1/8S751J   | R 852                                                                        | RS1/10S103J         |
| CAPACITORS                                |              |                                                                              |                     |
| C 101                                     | CEV101M6R3   | R 853                                                                        | RS1/10S103J         |
| C 102                                     | CKSQYB104K16 | R 854                                                                        | RS1/10S223J         |
| C 103                                     | CEV470M6R3   | R 856                                                                        | RS1/10S163J         |
| C 104                                     | CKSYB334K16  | R 858                                                                        | RS1/10S163J         |
| C 105                                     | CCSRCH330J50 | R 860                                                                        | RS1/10S103J         |
| C 106                                     | CKSRYB103K25 | R 861                                                                        | RS1/10S103J         |
| C 107                                     | CEV4R7M35    | R 862                                                                        | RS1/8S102J          |
| C 108                                     | CKSQYB273K50 | R 863                                                                        | RS1/8S102J          |
| C 109                                     | CCSRCH101J50 | R 864                                                                        | RS1/8S102J          |
| C 110                                     | CKSQYB104K16 | CAPACITORS                                                                   |                     |
| C 111                                     | CKSRYB332K50 | C 852                                                                        | CKSQYB473K25        |
| C 112                                     | CKSQYB473K16 | C 854                                                                        | CKSQYB473K25        |
| C 113                                     | CKSRYB103K25 | C 855                                                                        | CKSQYB103K50        |
| C 114                                     | CKSRYB391K50 | C 856                                                                        | CKSQYB103K50        |
| C 115                                     | CCSRCH121J50 | C 857                                                                        | CKSQYB103K50        |
| C 116                                     | CKSRYB682K50 | <div>A</div> Unit Number : CWM6379(DEH-P86DHR)<br>Unit Name : Tuner Amp Unit |                     |
| C 117                                     | CKSRYB333K16 |                                                                              |                     |
| C 118                                     | CKSYB334K16  |                                                                              |                     |
| C 119                                     | CKSYB334K16  |                                                                              |                     |
| C 120                                     | CKSYB334K16  |                                                                              |                     |
| C 121                                     | CKSYB334K16  | MISCELLANEOUS                                                                |                     |
| C 122                                     | CKSQYB104K16 | IC 101                                                                       | IC TA2050S          |
| C 123                                     | CKSRYB472K50 | IC 102                                                                       | IC CA0008AM         |
| C 124                                     | CKSQYB104K16 | IC 151                                                                       | IC SN761027DL       |
| C 125                                     | CCSRCH6R0D50 | IC 201                                                                       | IC PAL005A          |
| C 126                                     | CKSRYB153K25 | IC 271                                                                       | IC M5282FP          |
| C 127                                     | CCSRCH102J25 | IC 272                                                                       | IC MC14052BF        |
| C 201                                     | CKSYB334K16  | IC 273                                                                       | IC NJM2068MD        |
| C 202                                     | CKSQYB104K16 | IC 501                                                                       | IC LC72146M         |
| C 203                                     | CKSQYB104K16 | IC 601                                                                       | IC PD4722B          |
| C 303                                     | CEV470M16    | IC 661                                                                       | IC PD4623B          |
| C 304                                     | CKSRYB103K25 | IC 701                                                                       | IC PD6191A          |
| C 305                                     | CKSRYB103K25 | IC 731                                                                       | IC PMW001B          |
| C 306                                     | CKSRYB103K25 | IC 751                                                                       | IC PD8027A          |
| C 307                                     | CEV100M25    | IC 941                                                                       | IC S-80734ANDYI     |
| C 502                                     | CKSRYB471K50 | Q 101                                                                        | Transistor 2SA1037K |
| C 601                                     | CEV101M6R3   | Q 102                                                                        | Transistor DTC124EK |
| C 602                                     | CKSQYB104K16 | Q 201                                                                        | Transistor DTC124EK |
| C 603                                     | CEV4R7M35    | Q 251                                                                        | Transistor IMH3A    |
| C 604                                     | CEV4R7M35    | Q 252                                                                        | Transistor IMH3A    |
|                                           |              | Q 253                                                                        | Transistor IMD2A    |

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| ====Circuit Symbol and No. Part Name===== |     |            | Part No.   | ====Circuit Symbol and No. Part Name===== |           |                            | Part No.    |
|-------------------------------------------|-----|------------|------------|-------------------------------------------|-----------|----------------------------|-------------|
| Q                                         | 271 | Transistor | DTC343TK   | L                                         | 751       | Inductor                   | LAU100K     |
| Q                                         | 301 | Transistor | DTA124EK   | L                                         | 801       | Ferri-Inductor             | LAU2R2K     |
| Q                                         | 302 | Transistor | IMH3A      | L                                         | 802       | Transformer                | MTX9005     |
| Q                                         | 501 | Transistor | 2SC2412K   | L                                         | 901       | Choke Coil 600μH           | CTH1171     |
| Q                                         | 502 | Transistor | 2SK208     | X                                         | 501       | Crystal Resonator 7.2MHz   | CSS1334     |
| Q                                         | 503 | Transistor | 2SC2412K   | X                                         | 601       | Ceramic Resonator 6.29MHz  | CSS1310     |
| Q                                         | 601 | Transistor | DTC124EK   | X                                         | 661       | Resonator 8.380MHz         | CSS1354     |
| Q                                         | 661 | Transistor | DTA124EK   | X                                         | 701       | Crystal Resonator 4.332MHz | CSS1056     |
| Q                                         | 801 | Transistor | 2SA1037K   | S                                         | 941       | Switch(Reset)              | CSG1059     |
| Q                                         | 802 | Transistor | 2SD1760F5  |                                           |           | FM/AM Tuner Unit           | CWE1472     |
| Q                                         | 803 | Transistor | DTC114EK   |                                           |           | Detach Alarm Unit          | CWM5291     |
| Q                                         | 804 | Transistor | DTA143EK   | BZ                                        | 601       | Buzzer                     | CPV1011     |
| Q                                         | 805 | Transistor | DTC114EK   |                                           |           |                            |             |
| Q                                         | 806 | Transistor | 2SC2412K   |                                           |           |                            |             |
| Q                                         | 807 | Transistor | 2SB1238    |                                           |           |                            |             |
|                                           |     |            |            |                                           | RESISTORS |                            |             |
|                                           |     |            |            | R                                         | 101       |                            | RS1/10S620J |
| Q                                         | 808 | Transistor | DTC143EK   | R                                         | 102       |                            | RS1/10S101J |
| Q                                         | 809 | Transistor | 2SD1864    | R                                         | 103       |                            | RS1/10S101J |
| Q                                         | 911 | Transistor | 2SD1760F5  | R                                         | 104       |                            | RS1/10S222J |
| Q                                         | 921 | Transistor | IMX1       | R                                         | 105       |                            | RS1/10S122J |
| Q                                         | 922 | Transistor | DTC114EK   |                                           |           |                            |             |
|                                           |     |            |            | R                                         | 106       |                            | RS1/10S122J |
| Q                                         | 941 | Transistor | DTA144TK   | R                                         | 107       |                            | RS1/10S181J |
| Q                                         | 951 | Transistor | 2SD2396    | R                                         | 108       |                            | RS1/10S181J |
| Q                                         | 952 | Transistor | 2SB1243    | R                                         | 109       |                            | RS1/10S153J |
| Q                                         | 953 | Transistor | DTC124EK   | R                                         | 110       |                            | RS1/10S153J |
| Q                                         | 954 | Transistor | 2SA1674    |                                           |           |                            |             |
|                                           |     |            |            | R                                         | 111       |                            | RS1/10S222J |
| Q                                         | 955 | Transistor | 2SA1674    | R                                         | 112       |                            | RS1/10S222J |
| Q                                         | 956 | Transistor | IMH1A      | R                                         | 113       |                            | RS1/10S102J |
| Q                                         | 957 | Transistor | 2SC2412K   | R                                         | 114       |                            | RS1/10S102J |
| Q                                         | 958 | Transistor | DTC144EK   | R                                         | 115       |                            | RS1/10S473J |
| Q                                         | 971 | Transistor | 2SD2396    |                                           |           |                            |             |
|                                           |     |            |            | R                                         | 116       |                            | RS1/10S473J |
| Q                                         | 972 | Transistor | IMD2A      | R                                         | 117       |                            | RS1/10S332J |
| D                                         | 201 | Diode      | DAN202K    | R                                         | 118       |                            | RS1/10S682J |
| D                                         | 501 | Diode      | DAN202K    | R                                         | 119       |                            | RS1/10S103J |
| D                                         | 502 | Diode      | HZS3LL(B)  | R                                         | 133       |                            | RS1/10S162J |
| D                                         | 731 | Diode      | MA3047(M)  |                                           |           |                            |             |
|                                           |     |            |            | R                                         | 134       |                            | RS1/10S162J |
| D                                         | 801 | Diode      | DA204K     | R                                         | 151       |                            | RS1/10S272J |
| D                                         | 802 | Diode      | DA204K     | R                                         | 152       |                            | RS1/10S272J |
| D                                         | 803 | Diode      | DA204K     | R                                         | 153       |                            | RS1/10S151J |
| D                                         | 804 | Diode      | MA3062(M)  | R                                         | 154       |                            | RS1/10S151J |
| D                                         | 805 | Diode      | HZS9L(B3)  |                                           |           |                            |             |
|                                           |     |            |            | R                                         | 201       |                            | RS1/10S103J |
| D                                         | 806 |            | HZS5LL(A)  | R                                         | 202       |                            | RS1/10S331J |
| D                                         | 851 | LED        | BR4361F    | R                                         | 204       |                            | RS1/10S103J |
| D                                         | 901 | Diode      | ERA15-02VH | R                                         | 205       |                            | RS1/10S103J |
| D                                         | 902 | Diode      | ERA15-02VH | R                                         | 251       |                            | RS1/10S821J |
| D                                         | 911 | Diode      | ERA15-02VH |                                           |           |                            |             |
|                                           |     |            |            | R                                         | 252       |                            | RS1/10S821J |
| D                                         | 912 | Diode      | HZS6L(B1)  | R                                         | 253       |                            | RS1/10S471J |
| D                                         | 921 | Diode      | HZS7L(C3)  | R                                         | 254       |                            | RS1/10S471J |
| D                                         | 922 | Diode      | 1SS133     | R                                         | 255       |                            | RS1/10S223J |
| D                                         | 923 | Diode      | HZS7L(A1)  | R                                         | 256       |                            | RS1/10S223J |
| D                                         | 931 | Diode      | ERA15-02VH |                                           |           |                            |             |
|                                           |     |            |            | R                                         | 257       |                            | RS1/10S223J |
| D                                         | 932 | Diode      | ERA15-02VH | R                                         | 258       |                            | RS1/10S223J |
| D                                         | 941 | Diode      | DAN212K    | R                                         | 271       |                            | RS1/10S183J |
| D                                         | 951 | Diode      | HZS9L(B3)  | R                                         | 272       |                            | RS1/10S183J |
| D                                         | 952 | Diode      | HZS9L(A2)  | R                                         | 273       |                            | RS1/10S103J |
| D                                         | 953 | Diode      | 1SS133     |                                           |           |                            |             |
|                                           |     |            |            | R                                         | 274       |                            |             |

| ====Circuit Symbol and No. Part | Name===== | Part No.    | ====Circuit Symbol and No. Part | Name===== | Part No.    |
|---------------------------------|-----------|-------------|---------------------------------|-----------|-------------|
| R 284                           |           | RS1/10S104J | R 671                           |           | RS1/10S473J |
| R 285                           |           | RS1/10S105J | R 672                           |           | RS1/10S222J |
| R 286                           |           | RS1/10S821J | R 673                           |           | RS1/10S473J |
| R 287                           |           | RS1/10S223J | R 674                           |           | RS1/10S473J |
| R 301                           |           | RS1/10S471J | R 701                           |           | RS1/10S681J |
| R 302                           |           | RS1/10S471J | R 702                           |           | RS1/10S681J |
| R 303                           |           | RS1/10S104J | R 703                           |           | RS1/10S222J |
| R 304                           |           | RS1/10S104J | R 704                           |           | RS1/10S105J |
| R 501                           |           | RS1/10S102J | R 705                           |           | RS1/10S681J |
| R 502                           |           | RS1/10S102J | R 706                           |           | RS1/10S0R0J |
| R 503                           |           | RS1/10S102J | R 710                           |           | RS1/10S473J |
| R 506                           |           | RS1/10S103J | R 711                           |           | RA3C681J    |
| R 508                           |           | RS1/10S472J | R 712                           |           | RS1/10S0R0J |
| R 509                           |           | RS1/10S152J | R 713                           |           | RS1/10S473J |
| R 510                           |           | RS1/10S102J | R 714                           |           | RA4C473J    |
| R 511                           |           | RS1/10S472J | R 731                           |           | RA3C102J    |
| R 512                           |           | RS1/10S103J | R 732                           |           | RS1/10S681J |
| R 513                           |           | RS1/10S102J | R 733                           |           | RS1/10S393J |
| R 515                           |           | RS1/10S103J | R 735                           |           | RS1/10S102J |
| R 516                           |           | RS1/10S222J | R 736                           |           | RD1/4PU151J |
| R 517                           |           | RS1/10S473J | R 751                           |           | RS1/10S473J |
| R 518                           |           | RS1/10S473J | R 752                           |           | RS1/10S473J |
| R 519                           |           | RS1/10S473J | R 753                           |           | RS1/10S473J |
| R 520                           |           | RS1/10S224J | R 802                           |           | RS1/8S222J  |
| R 521                           |           | RS1/10S473J | R 804                           |           | RS1/8S472J  |
| R 522                           |           | RS1/10S473J | R 806                           |           | RS1/8S472J  |
| R 523                           |           | RS1/10S472J | R 808                           |           | RS1/10S472J |
| R 524                           |           | RS1/10S472J | R 809                           |           | RS1/10S472J |
| R 525                           |           | RS1/10S222J | R 810                           |           | RS2PMF100J  |
| R 526                           |           | RS1/10S223J | R 811                           |           | RD1/4PU471J |
| R 601                           |           | RS1/10S473J | R 812                           |           | RS1/10S103J |
| R 602                           |           | RS1/10S473J | R 813                           |           | RS1/10S224J |
| R 603                           |           | RS1/10S473J | R 814                           |           | RS1/10S222J |
| R 604                           |           | RS1/10S473J | R 815                           |           | RD1/4PU102J |
| R 605                           |           | RS1/10S473J | R 816                           |           | RS1/10S391J |
| R 606                           |           | RS1/10S473J | R 817                           |           | RS1/10S752J |
| R 607                           |           | RS1/10S473J | R 818                           |           | RS1/10S104J |
| R 608                           |           | RS1/10S221J | R 819                           |           | RS2P300JL   |
| R 609                           |           | RS1/10S682J | R 851                           |           | RS1/8S331J  |
| R 610                           |           | RA4C221J    | R 865                           |           | RS1/10S103J |
| R 611                           |           | RS1/10S682J | R 866                           |           | RS1/10S102J |
| R 613                           |           | RS1/10S682J | R 867                           |           | RS1/10S473J |
| R 615                           |           | RS1/10S682J | R 868                           |           | RS1/10S473J |
| R 617                           |           | RA4C681J    | R 869                           |           | RS1/10S473J |
| R 623                           |           | RS1/10S473J | R 911                           |           | RS1/10S332J |
| R 624                           |           | RS1/10S102J | R 912                           |           | RS1/10S101J |
| R 625                           |           | RS1/10S202J | R 921                           |           | RS1/10S103J |
| R 626                           |           | RS1/10S473J | R 922                           |           | RS1/10S473J |
| R 627                           |           | RS1/10S473J | R 923                           |           | RS1/10S103J |
| R 628                           |           | RS1/10S473J | R 924                           |           | RS1/10S103J |
| R 629                           |           | RS1/10S473J | R 925                           |           | RS1/10S473J |
| R 630                           |           | RS1/10S222J | R 926                           |           | RS1/10S472J |
| R 631                           |           | RS1/10S473J | R 931                           |           | RS1/10S103J |
| R 633                           |           | RS1/10S473J | R 941                           |           | RS1/10S102J |
| R 634                           |           | RS1/10S473J | R 942                           |           | RS1/10S822J |
| R 637                           |           | RS1/10S393J | R 943                           |           | RS1/8S471J  |
| R 651                           |           | RS1/10S681J | R 944                           |           | RS1/10S473J |
| R 652                           |           | RS1/10S102J | R 951                           |           | RD1/4PU221J |
| R 653                           |           | RS1/10S102J | R 952                           |           | RD1/4PU301J |
| R 654                           |           | RS1/10S102J | R 953                           |           | RS1/10S1R0J |
| R 662                           |           | RS1/10S473J | R 954                           |           | RD1/4PU331J |
| R 663                           |           | RS1/10S222J | R 955                           |           | RD1/4PU331J |
| R 668                           |           | RS1/10S103J | R 956                           |           | RS1/8S472J  |
| R 669                           |           | RS1/10S203J | R 957                           |           | RD1/4PU102J |
| R 670                           |           | RS1/10S222J | R 958                           |           | RS1/10S472J |

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| ====Circuit Symbol and No. Part | Name=====  | Part No.     | ====Circuit Symbol and No. Part | Name===== | Part No.     |
|---------------------------------|------------|--------------|---------------------------------|-----------|--------------|
| R 959                           |            | RD1/4PU102J  | C 274                           |           | CEJA4R7M35   |
| R 960                           |            | RS1/10S472J  | C 275                           |           | CEJANP220M10 |
| R 961                           |            | RS1/10S103J  | C 276                           |           | CKSQYB222K50 |
| R 962                           |            | RS1/10S473J  | C 277                           |           | CKSQYB183K25 |
| R 963                           |            | RS1/10S473J  | C 278                           |           | CKSQYB473K25 |
| R 971                           |            | RD1/4PU221J  | C 279                           |           | CKSQYB273K25 |
| R 972                           |            | RS1/10S221J  | C 280                           |           | CKSQYB103K50 |
| R 973                           |            | RS1/10S472J  | C 281                           |           | CKSQYB223K25 |
| R 974                           |            | RS1/8S122J   | C 282                           |           | CKSQYB153K50 |
|                                 |            |              | C 283                           |           | CEAS4R7M25   |
| CAPACITORS                      |            |              | C 284                           |           | CKSQYB104K16 |
| C 103                           |            | CEJA1R0M50   | C 285                           |           | CKSYB105K16  |
| C 104                           |            | CEJA1R0M50   | C 301                           |           | CEJA3R3M50   |
| C 105                           |            | CEJA1R0M50   | C 302                           |           | CEJA3R3M50   |
| C 106                           |            | CEJA1R0M50   | C 501                           |           | CKSQYB223K25 |
| C 107                           |            | CEJA100M16   |                                 |           |              |
| C 108                           |            | CKSQYB473K25 | C 502                           |           | CKSQYB223K25 |
| C 109                           |            | CKSQYB104K16 | C 503                           |           | CKSQYB103K50 |
| C 131                           |            | CEJA4R7M35   | C 504                           |           | CKSQYB103K50 |
| C 132                           |            | CEJA4R7M35   | C 505                           |           | CKSQYB103K50 |
| C 133                           |            | CKSQYB473K25 | C 506                           |           | CKSQYB473K25 |
| C 134                           |            | CKSQYB473K25 | C 507                           |           | CKSQYB102K50 |
| C 135                           |            | CEJA4R7M35   | C 509                           |           | CKLSR473K16  |
| C 136                           |            | CEJA4R7M35   | C 510                           |           | CKSQYB103K50 |
| C 137                           |            | CEJA4R7M35   | C 512                           |           | CEJA100M16   |
| C 138                           |            | CEJA4R7M35   | C 513                           |           | CKSQYB103K50 |
| C 151                           |            | CKSQYB104K16 | C 514                           |           | CCSQCH101J50 |
| C 152                           |            | CEAS470M10   | C 515                           |           | CCSQCH101J50 |
| C 153                           |            | CEJANP100M10 | C 516                           |           | CKSQYB103K50 |
| C 154                           |            | CEJANP100M10 | C 518                           | 4.7μF/16V | CCH1250      |
| C 155                           |            | CKSQYB822K50 | C 519                           |           | CKSQYB103K50 |
| C 156                           |            | CKSQYB822K50 | C 520                           |           | CCSQCH150J50 |
| C 157                           |            | CEJA1R0M50   | C 521                           |           | CCSQCH150J50 |
| C 158                           |            | CEJA1R0M50   | C 522                           |           | CKSQYB223K25 |
| C 159                           |            | CKSQYB183K25 | C 603                           |           | CEJA100M16   |
| C 160                           |            | CKSQYB183K25 | C 604                           |           | CKSQYB103K50 |
| C 161                           |            | CKSQYB102K50 | C 605                           |           | CCSQCH101J50 |
| C 162                           |            | CKSQYB102K50 | C 606                           |           | CCSQCH101J50 |
| C 163                           |            | CEJANP2R2M35 | C 607                           |           | CASA1R0M16   |
| C 164                           |            | CEJANP2R2M35 | C 609                           |           | CCSQCH101J50 |
| C 165                           |            | CKSQYB333K25 | C 661                           |           | CCSQCH101J50 |
| C 166                           |            | CKSQYB333K25 | C 662                           |           | CEJA4R7M35   |
| C 167                           |            | CEJA220M6R3  | C 663                           |           | CKSQYB104K16 |
| C 168                           |            | CEJA2R2M50   | C 664                           |           | CKSQYB473K25 |
| C 169                           |            | CKSQYB104K16 | C 702                           |           | CCSQCH270J50 |
| C 201                           |            | CKSYB224K16  | C 703                           |           | CCSQCH270J50 |
| C 202                           |            | CKSYB224K16  | C 705                           |           | CKSYB473K16  |
| C 203                           |            | CKSYB224K16  | C 706                           |           | CKSQYB473K25 |
| C 204                           |            | CKSYB224K16  | C 708                           |           | CKSQYB104K16 |
| C 205                           |            | CEHAR010M50  | C 731                           |           | CEJA100M16   |
| C 206                           | 3300μF/16V | CCH1163      | C 733                           |           | CKSQYB102K50 |
| C 207                           |            | CKSQYB103K50 | C 734                           |           | CKSQYB472K50 |
| C 208                           |            | CEHAR100M16  | C 735                           |           | CKSQYB104K16 |
| C 209                           |            | CKSYB105K16  | C 736                           |           | CKSYB105K16  |
| C 210                           |            | CEHAR330M10  | C 737                           |           | CKSQYB104K16 |
| C 251                           |            | CEJA4R7M35   | C 738                           |           | CEJA100M16   |
| C 252                           |            | CEJA4R7M35   | C 751                           |           | CEJA100M16   |
| C 253                           |            | CEJA4R7M35   | C 752                           |           | CKSQYB103K50 |
| C 254                           |            | CEJA4R7M35   | C 753                           |           | CKSYB103K50  |
| C 255                           |            | CKSQYB221K50 | C 801                           |           | CKSYB104K16  |
| C 256                           |            | CKSQYB221K50 | C 802                           |           | CCSQCH101J50 |
| C 257                           |            | CKSQYB221K50 | C 803                           |           | CEHAR100M16  |
| C 258                           |            | CKSQYB221K50 | C 804                           |           | CKSQYB103K50 |
| C 271                           |            | CEAS220M10   | C 805                           |           | CEHAR100M16  |
| C 272                           |            | CEAS101M10   | C 806                           |           | CKSQYB103K50 |
| C 273                           |            | CKSQYB472K50 | C 807                           |           | CKSQYB333K25 |

| ====Circuit Symbol and No. Part Name===== |     |            | Part No.     | ====Circuit Symbol and No. Part Name===== |     |                            | Part No.     |  |
|-------------------------------------------|-----|------------|--------------|-------------------------------------------|-----|----------------------------|--------------|--|
| C                                         | 808 |            | CKSQYB333K25 | Q                                         | 955 | Transistor                 | 2SA1674      |  |
| C                                         | 809 |            | CEJANP4R7M16 | Q                                         | 956 | Transistor                 | IMH1A        |  |
| C                                         | 858 |            | CKSQYB473K25 | Q                                         | 957 | Transistor                 | 2SC2412K     |  |
| C                                         | 901 |            | CKSQYB103K50 | Q                                         | 958 | Transistor                 | DTC144EK     |  |
| C                                         | 911 |            | CKSQYB103K50 | Q                                         | 971 | Transistor                 | 2SD2396      |  |
| C                                         | 912 | 0.22F/5.5V | CCL1037      |                                           |     |                            |              |  |
|                                           |     |            |              | Q                                         | 972 | Transistor                 | IMD2A        |  |
| C                                         | 913 |            | CKSQYB472K50 | D                                         | 201 | Diode                      | DAN202K      |  |
| C                                         | 914 |            | CEHAQ102M16  | D                                         | 501 | Diode                      | DAN202K      |  |
| C                                         | 915 |            | CEAS470M10   | D                                         | 502 | Diode                      | HZS3LL(B)    |  |
| C                                         | 921 |            | CKSYB105K16  | D                                         | 801 | Diode                      | DA204K       |  |
| C                                         | 922 |            | CKSYB102K50  |                                           |     |                            |              |  |
|                                           |     |            |              | D                                         | 802 | Diode                      | DA204K       |  |
| C                                         | 931 |            | CKSQYB473K25 | D                                         | 803 | Diode                      | DA204K       |  |
| C                                         | 941 |            | CEJA2R2M50   | D                                         | 804 | Diode                      | MA3062(M)    |  |
| C                                         | 951 |            | CKSQYB103K50 | D                                         | 805 | Diode                      | HZS9L(B3)    |  |
| C                                         | 952 |            | CEHAQ101M16  | D                                         | 806 |                            | HZS5LL(A)    |  |
| C                                         | 953 |            | CKSQYB103K50 |                                           |     |                            |              |  |
|                                           |     |            |              | D                                         | 851 | LED                        | BR4361F      |  |
| C                                         | 954 | 330μF/10V  | CCH1181      | D                                         | 901 | Diode                      | ERA15-02VH   |  |
| C                                         | 971 |            | CKSQYB473K25 | D                                         | 902 | Diode                      | ERA15-02VH   |  |
| C                                         | 972 |            | CKSQYB102K50 | D                                         | 911 | Diode                      | ERA15-02VH   |  |
| C                                         | 973 |            | CEAS101M10   | D                                         | 912 | Diode                      | HZS6L(B1)    |  |
|                                           |     |            |              |                                           |     |                            |              |  |
|                                           |     |            |              | D                                         | 921 | Diode                      | HZS7L(C3)    |  |
|                                           |     |            |              | D                                         | 922 | Diode                      | 1SS133       |  |
|                                           |     |            |              | D                                         | 923 | Diode                      | HZS7L(A1)    |  |
|                                           |     |            |              | D                                         | 931 | Diode                      | ERA15-02VH   |  |
|                                           |     |            |              | D                                         | 932 | Diode                      | ERA15-02VH   |  |
| MISCELLANEOUS                             |     |            |              |                                           |     |                            |              |  |
| IC                                        | 101 | IC         | TA2050S      | D                                         | 941 | Diode                      | DAN212K      |  |
| IC                                        | 102 | IC         | CA0008AM     | D                                         | 951 | Diode                      | HZS9L(B3)    |  |
| IC                                        | 151 | IC         | SN761027DL   | D                                         | 952 | Diode                      | HZS9L(A2)    |  |
| IC                                        | 201 | IC         | PAL005A      | D                                         | 953 | Diode                      | 1SS133       |  |
| IC                                        | 501 | IC         | LC72146M     | D                                         | 971 | Diode                      | HZS9L(B1)    |  |
|                                           |     |            |              |                                           |     |                            |              |  |
| IC                                        | 601 | IC         | PD4754B      | L                                         | 101 | Inductor                   | LAU3R3K      |  |
| IC                                        | 661 | IC         | PD4623B      | L                                         | 501 | Ferri-Inductor             | LAU2R2K      |  |
| IC                                        | 701 | IC         | PD6194A      | L                                         | 502 | Ferri-Inductor             | LAU220K      |  |
| IC                                        | 751 | IC         | PD8027A      | L                                         | 503 | Inductor                   | LCTBR39K2125 |  |
| IC                                        | 941 | IC         | S-80734ANDYI | L                                         | 601 | Ferri-Inductor             | LAU2R2K      |  |
|                                           |     |            |              |                                           |     |                            |              |  |
| Q                                         | 101 | Transistor | 2SA1037K     | L                                         | 602 | Inductor                   | LAU100K      |  |
| Q                                         | 102 | Transistor | DTC124EK     | L                                         | 661 | Ferri-Inductor             | LAU2R2K      |  |
| Q                                         | 201 | Transistor | DTC124EK     | L                                         | 701 | Inductor                   | LAU100K      |  |
| Q                                         | 251 | Transistor | IMH3A        | L                                         | 751 | Inductor                   | LAU100K      |  |
| Q                                         | 252 | Transistor | IMH3A        | L                                         | 801 | Ferri-Inductor             | LAU2R2K      |  |
|                                           |     |            |              |                                           |     |                            |              |  |
| Q                                         | 253 | Transistor | IMD2A        | L                                         | 802 | Transformer                | MTX9005      |  |
| Q                                         | 301 | Transistor | DTA124EK     | L                                         | 901 | Choke Coil 600μH           | CTH1171      |  |
| Q                                         | 302 | Transistor | IMH3A        | X                                         | 501 | 7.2MHz                     | CSS1334      |  |
| Q                                         | 501 | Transistor | 2SC2412K     | X                                         | 601 | Ceramic Resonator 6.29MHz  | CSS1310      |  |
| Q                                         | 502 | Transistor | 2SK208       | X                                         | 661 | Resonator 8.380MHz         | CSS1354      |  |
|                                           |     |            |              |                                           |     |                            |              |  |
| Q                                         | 503 | Transistor | 2SC2412K     | X                                         | 701 | Crystal Resonator 4.330MHz | CSS1338      |  |
| Q                                         | 601 | Transistor | DTC124EK     | S                                         | 941 | Switch(Reset)              | CSG1059      |  |
| Q                                         | 661 | Transistor | DTA124EK     |                                           |     | FM/AM Tuner Unit           | CWE1417      |  |
| Q                                         | 801 | Transistor | 2SA1037K     |                                           |     | Detach Alarm Unit          | CWM5291      |  |
| Q                                         | 802 | Transistor | 2SD1760F5    | BZ                                        | 601 | Buzzer                     | CPV1011      |  |
|                                           |     |            |              |                                           |     |                            |              |  |
| Q                                         | 803 | Transistor | DTC114EK     | RESISTORS                                 |     |                            |              |  |
| Q                                         | 804 | Transistor | DTA143EK     |                                           |     |                            |              |  |
| Q                                         | 805 | Transistor | DTC114EK     | R                                         | 101 |                            | RS1/10S620J  |  |
| Q                                         | 806 | Transistor | 2SC2412K     | R                                         | 102 |                            | RS1/10S101J  |  |
| Q                                         | 807 | Transistor | 2SB1238      | R                                         | 103 |                            | RS1/10S101J  |  |
|                                           |     |            |              | R                                         | 104 |                            | RS1/10S222J  |  |
|                                           |     |            |              | R                                         | 105 |                            | RS1/10S122J  |  |
|                                           |     |            |              |                                           |     |                            |              |  |
| Q                                         | 808 | Transistor | DTC143EK     |                                           |     |                            |              |  |
| Q                                         | 809 | Transistor | 2SD1864      |                                           |     |                            |              |  |
| Q                                         | 911 | Transistor | 2SD1760F5    | R                                         | 106 |                            | RS1/10S122J  |  |
| Q                                         | 921 | Transistor | IMX1         | R                                         | 107 |                            | RS1/10S181J  |  |
| Q                                         | 922 | Transistor | DTC114EK     | R                                         | 108 |                            | RS1/10S181J  |  |
|                                           |     |            |              | R                                         | 109 |                            | RS1/10S153J  |  |
|                                           |     |            |              | R                                         | 110 |                            | RS1/10S153J  |  |
|                                           |     |            |              |                                           |     |                            |              |  |
| Q                                         | 941 | Transistor | DTA144TK     |                                           |     |                            |              |  |
| Q                                         | 951 | Transistor | 2SD2396      |                                           |     |                            |              |  |
| Q                                         | 952 | Transistor | 2SB1243      | R                                         | 111 |                            | RS1/10S222J  |  |
| Q                                         | 953 | Transistor | DTC124EK     | R                                         | 112 |                            | RS1/10S222J  |  |
| Q                                         | 954 | Transistor | 2SA1674      | R                                         | 113 |                            | RS1/10S102J  |  |
|                                           |     |            |              | R                                         | 114 |                            | RS1/10S102J  |  |
|                                           |     |            |              | R                                         | 115 |                            | RS1/10S473J  |  |

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| ====Circuit Symbol and No. Part | Name===== | Part No.    | ====Circuit Symbol and No. Part | Name===== | Part No.    |
|---------------------------------|-----------|-------------|---------------------------------|-----------|-------------|
| R 116                           |           | RS1/10S473J | R 626                           |           | RS1/10S473J |
| R 117                           |           | RS1/10S332J | R 627                           |           | RS1/10S473J |
| R 118                           |           | RS1/10S682J | R 628                           |           | RS1/10S473J |
| R 119                           |           | RS1/10S103J | R 629                           |           | RS1/10S473J |
| R 133                           |           | RS1/10S162J | R 630                           |           | RS1/10S222J |
| R 134                           |           | RS1/10S162J | R 631                           |           | RS1/10S473J |
| R 151                           |           | RS1/10S272J | R 633                           |           | RS1/10S473J |
| R 152                           |           | RS1/10S272J | R 635                           |           | RS1/10S473J |
| R 153                           |           | RS1/10S151J | R 637                           |           | RS1/10S393J |
| R 154                           |           | RS1/10S151J | R 651                           |           | RS1/10S681J |
| R 201                           |           | RS1/10S103J | R 652                           |           | RS1/10S102J |
| R 202                           |           | RS1/10S331J | R 653                           |           | RS1/10S102J |
| R 204                           |           | RS1/10S103J | R 654                           |           | RS1/10S102J |
| R 205                           |           | RS1/10S103J | R 662                           |           | RS1/10S473J |
| R 251                           |           | RS1/10S821J | R 663                           |           | RS1/10S222J |
| R 252                           |           | RS1/10S821J | R 668                           |           | RS1/10S103J |
| R 253                           |           | RS1/10S471J | R 669                           |           | RS1/10S203J |
| R 254                           |           | RS1/10S471J | R 670                           |           | RS1/10S222J |
| R 255                           |           | RS1/10S223J | R 671                           |           | RS1/10S473J |
| R 256                           |           | RS1/10S223J | R 672                           |           | RS1/10S222J |
| R 257                           |           | RS1/10S223J | R 673                           |           | RS1/10S473J |
| R 258                           |           | RS1/10S223J | R 674                           |           | RS1/10S473J |
| R 301                           |           | RS1/10S471J | R 701                           |           | RS1/10S681J |
| R 302                           |           | RS1/10S471J | R 702                           |           | RS1/10S681J |
| R 303                           |           | RS1/10S104J | R 703                           |           | RS1/10S0R0J |
| R 304                           |           | RS1/10S104J | R 704                           |           | RS1/10S105J |
| R 501                           |           | RS1/10S102J | R 705                           |           | RS1/10S681J |
| R 502                           |           | RS1/10S102J | R 706                           |           | RS1/10S0R0J |
| R 503                           |           | RS1/10S102J | R 710                           |           | RS1/10S473J |
| R 506                           |           | RS1/10S103J | R 711                           |           | RA3C681J    |
| R 508                           |           | RS1/10S472J | R 713                           |           | RS1/10S473J |
| R 509                           |           | RS1/10S152J | R 714                           |           | RA4C473J    |
| R 510                           |           | RS1/10S102J | R 751                           |           | RS1/10S473J |
| R 511                           |           | RS1/10S472J | R 752                           |           | RS1/10S473J |
| R 512                           |           | RS1/10S103J | R 753                           |           | RS1/10S473J |
| R 513                           |           | RS1/10S102J | R 802                           |           | RS1/8S222J  |
| R 515                           |           | RS1/10S103J | R 804                           |           | RS1/8S472J  |
| R 516                           |           | RS1/10S222J | R 806                           |           | RS1/8S472J  |
| R 517                           |           | RS1/10S473J | R 808                           |           | RS1/10S472J |
| R 518                           |           | RS1/10S473J | R 809                           |           | RS1/10S472J |
| R 519                           |           | RS1/10S473J | R 810                           |           | RS2PMF100J  |
| R 520                           |           | RS1/10S224J | R 811                           |           | RD1/4PU471J |
| R 521                           |           | RS1/10S473J | R 812                           |           | RS1/10S103J |
| R 522                           |           | RS1/10S473J | R 813                           |           | RS1/10S224J |
| R 523                           |           | RS1/10S472J | R 814                           |           | RS1/10S222J |
| R 524                           |           | RS1/10S472J | R 815                           |           | RD1/4PU102J |
| R 525                           |           | RS1/10S222J | R 816                           |           | RS1/10S391J |
| R 526                           |           | RS1/10S223J | R 817                           |           | RS1/10S752J |
| R 601                           |           | RS1/10S473J | R 818                           |           | RS1/10S104J |
| R 602                           |           | RS1/10S473J | R 819                           |           | RS2P300JL   |
| R 603                           |           | RS1/10S473J | R 851                           |           | RS1/8S331J  |
| R 604                           |           | RS1/10S473J | R 865                           |           | RS1/10S103J |
| R 605                           |           | RS1/10S473J | R 866                           |           | RS1/10S102J |
| R 606                           |           | RS1/10S473J | R 867                           |           | RS1/10S473J |
| R 607                           |           | RS1/10S473J | R 868                           |           | RS1/10S473J |
| R 608                           |           | RS1/10S221J | R 869                           |           | RS1/10S473J |
| R 609                           |           | RS1/10S682J | R 911                           |           | RS1/10S332J |
| R 610                           |           | RA4C221J    | R 912                           |           | RS1/10S101J |
| R 611                           |           | RS1/10S682J | R 921                           |           | RS1/10S103J |
| R 613                           |           | RS1/10S682J | R 922                           |           | RS1/10S473J |
| R 615                           |           | RS1/10S682J | R 923                           |           | RS1/10S103J |
| R 617                           |           | RA4C681J    | R 924                           |           | RS1/10S103J |
| R 623                           |           | RS1/10S473J | R 925                           |           | RS1/10S473J |
| R 624                           |           | RS1/10S102J | R 926                           |           | RS1/10S472J |
| R 625                           |           | RS1/10S202J | R 931                           |           | RS1/10S103J |

| ====Circuit Symbol and No. Part | Name=====  | Part No.     | ====Circuit Symbol and No. Part | Name=====  | Part No.     |
|---------------------------------|------------|--------------|---------------------------------|------------|--------------|
| R 941                           |            | RS1/10S102J  | C 252                           |            | CEJA4R7M35   |
| R 942                           |            | RS1/10S822J  | C 253                           |            | CEJA4R7M35   |
| R 943                           |            | RS1/8S471J   | C 254                           |            | CEJA4R7M35   |
| R 944                           |            | RS1/10S473J  | C 255                           |            | CKSQYB221K50 |
| R 951                           |            | RD1/4PU221J  | C 256                           |            | CKSQYB221K50 |
| R 952                           |            | RD1/4PU301J  | C 257                           |            | CKSQYB221K50 |
| R 953                           |            | RS1/10S1R0J  | C 258                           |            | CKSQYB221K50 |
| R 954                           |            | RD1/4PU331J  | C 301                           |            | CEJA3R3M50   |
| R 955                           |            | RD1/4PU331J  | C 302                           |            | CEJA3R3M50   |
| R 956                           |            | RS1/8S472J   | C 501                           |            | CKSQYB223K25 |
| R 957                           |            | RD1/4PU102J  | C 502                           |            | CKSQYB223K25 |
| R 958                           |            | RS1/10S472J  | C 503                           |            | CKSQYB103K50 |
| R 959                           |            | RD1/4PU102J  | C 504                           |            | CKSQYB103K50 |
| R 960                           |            | RS1/10S472J  | C 505                           |            | CKSQYB103K50 |
| R 961                           |            | RS1/10S103J  | C 506                           |            | CKSQYB473K25 |
| R 962                           |            | RS1/10S473J  | C 507                           |            | CKSQYB102K50 |
| R 963                           |            | RS1/10S473J  | C 509                           |            | CKLSR473K16  |
| R 971                           |            | RD1/4PU221J  | C 510                           |            | CKSQYB103K50 |
| R 972                           |            | RS1/10S221J  | C 512                           |            | CEJA100M16   |
| R 973                           |            | RS1/10S472J  | C 513                           |            | CKSQYB103K50 |
| R 974                           |            | RS1/8S122J   | C 514                           |            | CCSQCH101J50 |
| CAPACITORS                      |            |              | C 515                           |            | CCSQCH101J50 |
|                                 |            |              | C 516                           |            | CKSQYB103K50 |
|                                 |            |              | C 518                           | 4.7μF/16V  | CCH1250      |
|                                 |            |              | C 519                           |            | CKSQYB103K50 |
|                                 |            |              | C 520                           |            | CCSQCH150J50 |
| C 103                           |            | CEJA1R0M50   | C 521                           |            | CCSQCH150J50 |
| C 104                           |            | CEJA1R0M50   | C 522                           |            | CKSQYB223K25 |
| C 105                           |            | CEJA1R0M50   | C 603                           |            | CEJA100M16   |
| C 106                           |            | CEJA1R0M50   | C 604                           |            | CKSQYB103K50 |
| C 107                           |            | CEJA100M16   |                                 |            |              |
| C 108                           |            | CKSQYB473K25 |                                 |            |              |
| C 109                           |            | CKSQYB104K16 |                                 |            |              |
| C 131                           |            | CEJA4R7M35   | C 605                           |            | CCSQCH101J50 |
| C 132                           |            | CEJA4R7M35   | C 606                           |            | CCSQCH101J50 |
| C 133                           |            | CKSQYB473K25 | C 607                           |            | CASA1R0M16   |
|                                 |            |              | C 609                           |            | CCSQCH101J50 |
| C 134                           |            | CKSQYB473K25 | C 661                           |            | CCSQCH101J50 |
| C 135                           |            | CEJA4R7M35   |                                 |            |              |
| C 136                           |            | CEJA4R7M35   | C 662                           |            | CEJA4R7M35   |
| C 137                           |            | CEJA4R7M35   | C 663                           |            | CKSQYB104K16 |
| C 138                           |            | CEJA4R7M35   | C 664                           |            | CKSQYB473K25 |
|                                 |            |              | C 705                           |            | CKSYB473K16  |
| C 151                           |            | CKSQYB104K16 | C 706                           |            | CKSQYB473K25 |
| C 152                           |            | CEAS470M10   |                                 |            |              |
| C 153                           |            | CEJANP100M10 | C 708                           |            | CKSQYB104K16 |
| C 154                           |            | CEJANP100M10 | C 751                           |            | CEJA100M16   |
| C 155                           |            | CKSQYB822K50 | C 752                           |            | CKSQYB103K50 |
|                                 |            |              | C 753                           |            | CKSYB103K50  |
| C 156                           |            | CKSQYB822K50 | C 801                           |            | CKSYB104K16  |
| C 157                           |            | CEJA1R0M50   |                                 |            |              |
| C 158                           |            | CEJA1R0M50   | C 802                           |            | CCSQCH101J50 |
| C 159                           |            | CKSQYB183K25 | C 803                           |            | CEHAR100M16  |
| C 160                           |            | CKSQYB183K25 | C 804                           |            | CKSQYB103K50 |
|                                 |            |              | C 805                           |            | CEHAR100M16  |
| C 161                           |            | CKSQYB102K50 | C 806                           |            | CKSQYB103K50 |
| C 162                           |            | CKSQYB102K50 |                                 |            |              |
| C 163                           |            | CEJANP2R2M35 | C 807                           |            | CKSQYB333K25 |
| C 164                           |            | CEJANP2R2M35 | C 808                           |            | CKSQYB333K25 |
| C 165                           |            | CKSQYB333K25 | C 809                           |            | CEJANP4R7M16 |
|                                 |            |              | C 858                           |            | CKSQYB473K25 |
| C 166                           |            | CKSQYB333K25 | C 901                           |            | CKSQYB103K50 |
| C 167                           |            | CEJA220M6R3  |                                 |            |              |
| C 168                           |            | CEJA2R2M50   | C 911                           |            | CKSQYB103K50 |
| C 169                           |            | CKSQYB104K16 | C 912                           | 0.22F/5.5V | CCL1037      |
| C 201                           |            | CKSYB224K16  | C 913                           |            | CKSQYB472K50 |
|                                 |            |              | C 914                           |            | CEHAQ102M16  |
| C 202                           |            | CKSYB224K16  | C 915                           |            | CEAS470M10   |
| C 203                           |            | CKSYB224K16  |                                 |            |              |
| C 204                           |            | CKSYB224K16  | C 921                           |            | CKSYB105K16  |
| C 205                           |            | CEHAR010M50  | C 922                           |            | CKSYB102K50  |
| C 206                           | 3300μF/16V | CCH1163      | C 931                           |            | CKSQYB473K25 |
|                                 |            |              | C 941                           |            | CEJA2R2M50   |
| C 207                           |            | CKSQYB103K50 | C 951                           |            | CKSQYB103K50 |
| C 208                           |            | CEHAR100M16  |                                 |            |              |
| C 209                           |            | CKSYB105K16  |                                 |            |              |
| C 210                           |            | CEHAR330M10  |                                 |            |              |
| C 251                           |            | CEJA4R7M35   |                                 |            |              |

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| ====Circuit Symbol and No. Part | Name===== | Part No.     |
|---------------------------------|-----------|--------------|
| C 952                           |           | CEHAQ101M16  |
| C 953                           |           | CKSQYB103K50 |
| C 954                           | 330μF/10V | CCH1181      |
| C 971                           |           | CKSQYB473K25 |
| C 972                           |           | CKSQYB102K50 |
| C 973                           |           | CEAS101M10   |

**C** Unit Number : CWX2069(DEH-P86DHR)  
Unit Number : CWX2070(DEH-P76DH)  
Unit Name : Keyboard Unit

## MISCELLANEOUS

|         |                             |              |
|---------|-----------------------------|--------------|
| IC 1901 | IC                          | PD6197A      |
| IC 1902 | IC                          | RS-140       |
| D 1901  | Diode                       | DA204K       |
| D 1902  | Diode                       | DA204K       |
| D 1903  | LED                         | CL220PGC     |
| D 1904  | LED                         | CL220PGC     |
| D 1905  | LED                         | CL220PGC     |
| D 1906  | LED                         | CL170PGCD    |
| D 1907  | LED                         | CL170PGCD    |
| D 1908  | LED                         | CL170PGCD    |
| L 1901  | Inductor                    | LCTB1R0K2125 |
| X 1901  | Ceramic Resonator 4.9152MHz | CSS1449      |
| S 1901  | Switch                      | CSG1085      |
| S 1902  | Switch                      | CSG1084      |
| S 1903  | Switch                      | CSG1085      |
| S 1904  | Switch                      | CSG1085      |
| S 1905  | Switch                      | CSG1085      |
| S 1906  | Switch                      | CSG1085      |
| S 1907  | Switch                      | CSG1085      |
| S 1908  | Switch                      | CSG1085      |
| S 1909  | Switch                      | CSG1061      |
| S 1910  | Switch                      | CSG1061      |
| S 1911  | Switch                      | CSG1084      |
| S 1912  | Switch                      | CSG1084      |
| S 1913  | Switch                      | CSG1084      |
| S 1914  | Switch                      | CSG1084      |
| S 1915  | Switch                      | CSG1084      |
| S 1916  | Switch                      | CSG1084      |
| S 1917  | Switch                      | CSG1085      |
| S 1918  | Switch                      | CSG1084      |
| S 1919  | Switch                      | CSG1084      |
| S 1920  | Switch                      | CSG1084      |
| S 1921  | Switch                      | CSG1086      |
|         | LCD(DEH-P86DHR)             | CAW1389      |
|         | LCD(DEH-P76DH)              | CAW1390      |
| EL      |                             | CEL1488      |

## RESISTORS

|        |            |
|--------|------------|
| R 1901 | RS1/8S222J |
| R 1902 | RS1/8S222J |
| R 1903 | RS1/8S562J |
| R 1904 | RS1/8S470J |
| R 1905 | RS1/8S2R2J |
| R 1906 | RS1/8S121J |
| R 1907 | RS1/8S121J |
| R 1908 | RS1/8S121J |
| R 1909 | RS1/8S121J |
| R 1910 | RS1/8S121J |
| R 1911 | RS1/8S121J |
| R 1912 | RS1/8S121J |
| R 1913 | RS1/8S121J |
| R 1914 | RS1/8S121J |
| R 1915 | RS1/8S121J |

| ====Circuit Symbol and No. Part | Name===== | Part No.     |
|---------------------------------|-----------|--------------|
| R 1916                          |           | RS1/8S0R0J   |
| R 1917                          |           | RS1/8S0R0J   |
| CAPACITORS                      |           |              |
| C 1901                          |           | CKSQYB103K50 |
| C 1902                          |           | CEV470M6R3   |
| C 1903                          |           | CKSQYB104K16 |
| C 1904                          |           | CKSQYB104K16 |
| C 1905                          |           | CKSYB104K25  |
| C 1906                          |           | CKSQYB104K16 |

**D** Unit Number :  
Unit Name : Photo Unit

|     |                  |            |
|-----|------------------|------------|
| Q 1 | Photo-transistor | CPT-230S-X |
| Q 2 | Photo-transistor | CPT-230S-X |

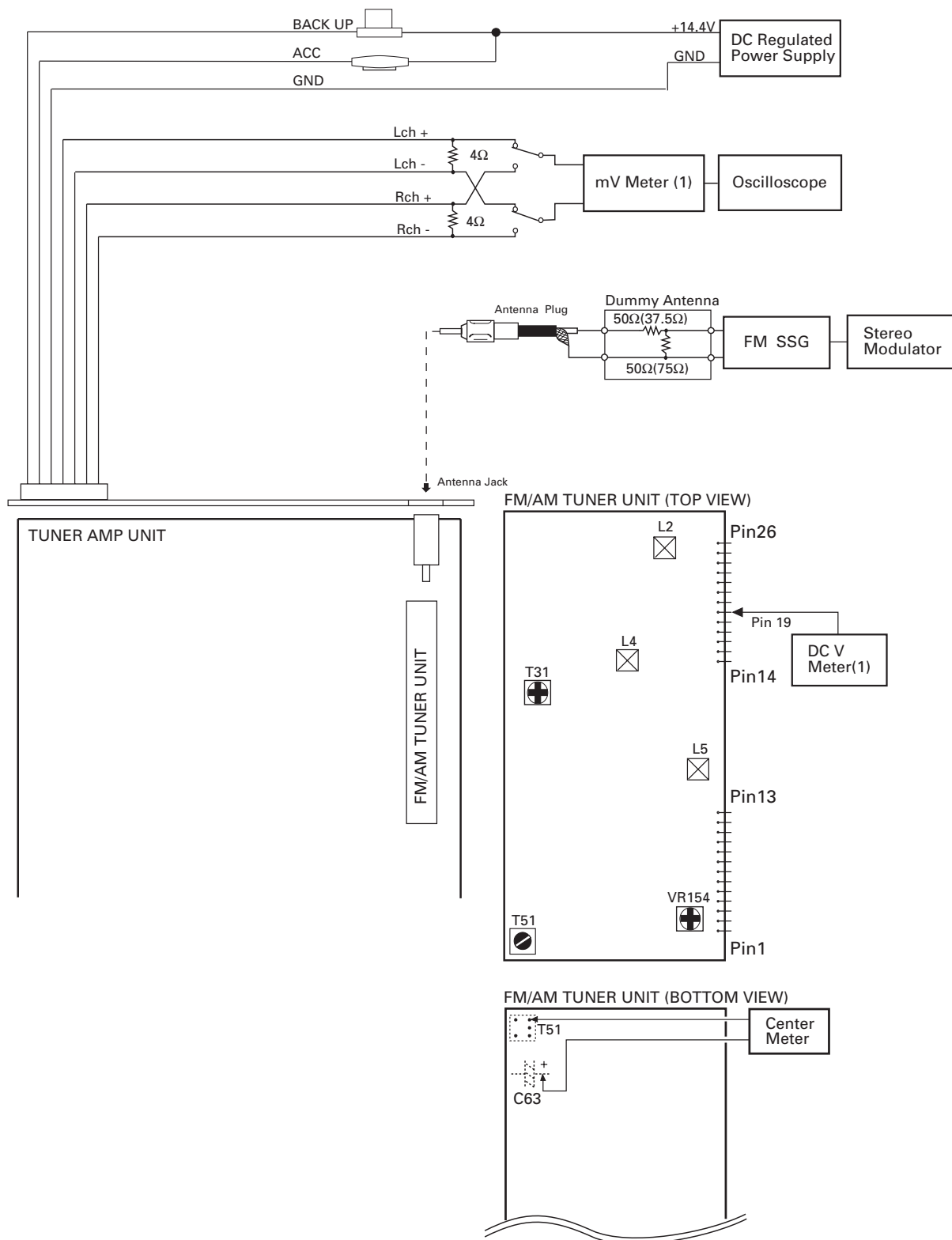
## Miscellaneous Parts List

|     |                          |         |
|-----|--------------------------|---------|
| M 1 | Pickup Unit(SERVICE)     | CXX1230 |
| M 2 | Motor Unit(Spindle)      | CXA8912 |
| M 3 | CRG Motor Unit(Carriage) | CXB3043 |
| M 3 | Load Motor Unit>Loading) | CXA8702 |

## 6. ADJUSTMENT

### 6.1 TUNER ADJUSTMENT

#### ● Connection Diagram



## FM ADJUSTMENT

Modulation M:MONO MOD., 400Hz 30%(22.5kHz Dev.) or 400Hz 100%(75kHz Dev.)

S:STEREO MOD., 1kHz, L or R=30%(20.25kHz+7.5kHz Dev.)

NOTE:Before proceeding to further adjustments after switching power ON, let the tuner run for ten minutes to allow the circuits to stabilize.

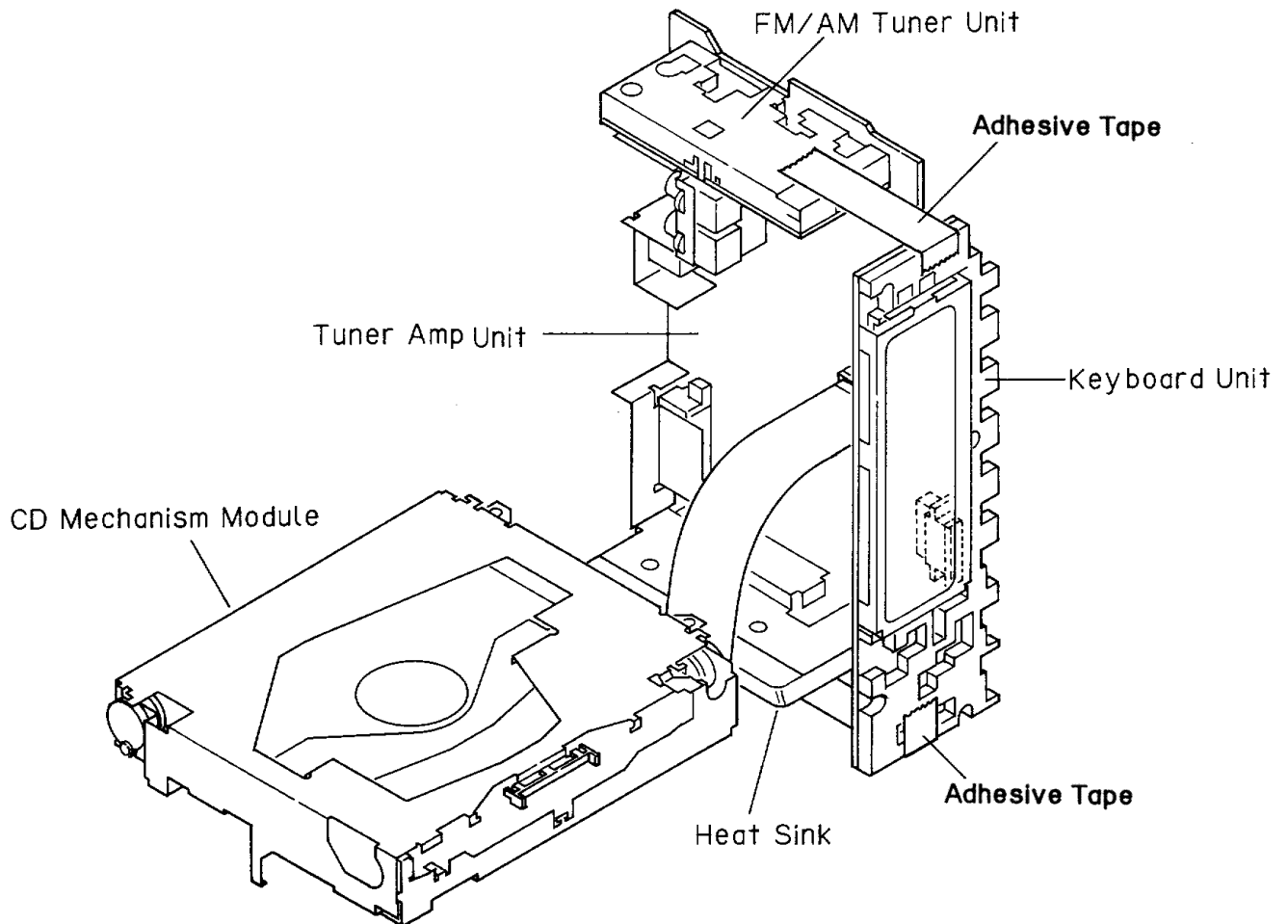
|          | No. | FM SSG         |            | Displayed<br>Frequency(MHz) | Adjustment<br>Point | Adjustment Method<br>(Switch Position)        |
|----------|-----|----------------|------------|-----------------------------|---------------------|-----------------------------------------------|
|          |     | Frequency(MHz) | Level(dBf) |                             |                     |                                               |
| TUN Volt | 1   | .....          | .....      | 107.9                       | L5                  | DC V Meter(1) : 6V                            |
| IF       | 2   | 98.1 M         | 60—100     | 98.1                        | T51                 | Center Meter : 0                              |
| ANT Coil | 3   | 98.1 M         | 5          | 98.1                        | L2                  | mV Meter(1) : Maximum                         |
| RF Coil  | 4   | 98.1 M         | 5          | 98.1                        | L4                  | mV Meter(1) : Maximum                         |
| IFT      | 5   | 98.1 M         | 5          | 98.1                        | T31                 | mV Meter(1) : Maximum<br>(STEREO MODE)        |
| ARC      | 6   | 98.1 S         | 40         | 98.1                        | VR154               | mV Meter(1) : Separation 5dB<br>(STEREO MODE) |

## 6.2 CHECKING THE KEYBOARD UNIT

When checking the Keyboard Unit and Tuner Amp Unit , set the unit as shown in the figure. Secure the Keyboard unit by using adhesive tape to prevent it from becoming unstable during the check.

Even without the CD mechanism module, the minimum necessary items, such as the EL check, can be checked.

In the Keyboard Unit and Tuner Amp Unit , there are EL high-voltage sections with the description of "HIGH VOLTAGE". Therefore, special care should be taken when handling them to prevent electrical shock.



## 6.3 CD ADJUSTMENT

### 1)Precautions

- This unit uses a single power supply (+5V) for the regulator. The signal reference potential, therefore, is connected to REFO(approx. 2.5V) instead of GND. If REFO and GND are connected to each other by mistake during adjustments, not only will it be impossible to measure the potential correctly, but the servo will malfunction and a severe shock will be applied to the pick-up. To avoid this, take special note of the following.  
Do not connect the negative probe of the measuring equipment to REFO and GND together. It is especially important not to connect the channel 1 negative probe of the oscilloscope to REFO with the channel 2 negative probe connected to GND.  
Since the frame of the measuring instrument is usually at the same potential as the negative probe, change the frame of the measuring instrument to floating status.  
If by accident REFO comes in contact with GND, immediately switch the regulator or power OFF.
- Always make sure the regulator is OFF when connecting and disconnecting the various filters and wiring required for measurements.
- Before proceeding to further adjustments and measurements after switching regulator ON, let the player run for about one minute to allow the circuits to stabilize.
- Since the protective systems in the unit's software are rendered inoperative in test mode, be very careful to avoid mechanical and /or electrical shocks to the system when making adjustment.
- Test mode starting procedure  
Switch ACC, back-up ON while pressing the **4** and **6** keys together.

- Test mode cancellation  
Switch ACC, back-up OFF.
- Disc detection during loading and eject operations is performed by means of a photo transistor in this unit. Consequently, if the inside of the unit is exposed to a strong light source when the outer casing is removed for repairs or adjustment, the following malfunctions may occur.  
\*During PLAY, even if the eject button is pressed, the disc will not be ejected and the unit will remain in the PLAY mode.  
\*The unit will not load a disc.  
When the unit malfunctions this way, either re-position the light source, move the unit or cover the photo transistor.
- When loading and unloading discs during adjustment procedures, always wait for the disc to be properly clamped or ejected before pressing another key. Otherwise, there is a risk of the actuator being destroyed.
- Turn power off when pressing the button **TR+** or the button **TR-** key for focus search in the test mode. (Or else lens may stick and the actuator may be damaged.)
- SINGLE/4TRK/10TRK/32TRK will continue to operate even after the key is released. Tracking is closed the moment C-MOVE is released.
- JUMP MODE resets to SINGLE as soon as power is switched OFF.

## 6.4 CHECKING THE GRATING

### ● Checking the Grating After Changing the Pickup Unit

• **Note :**

Unlike previous CD mechanism modules the grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

• **Purpose :**

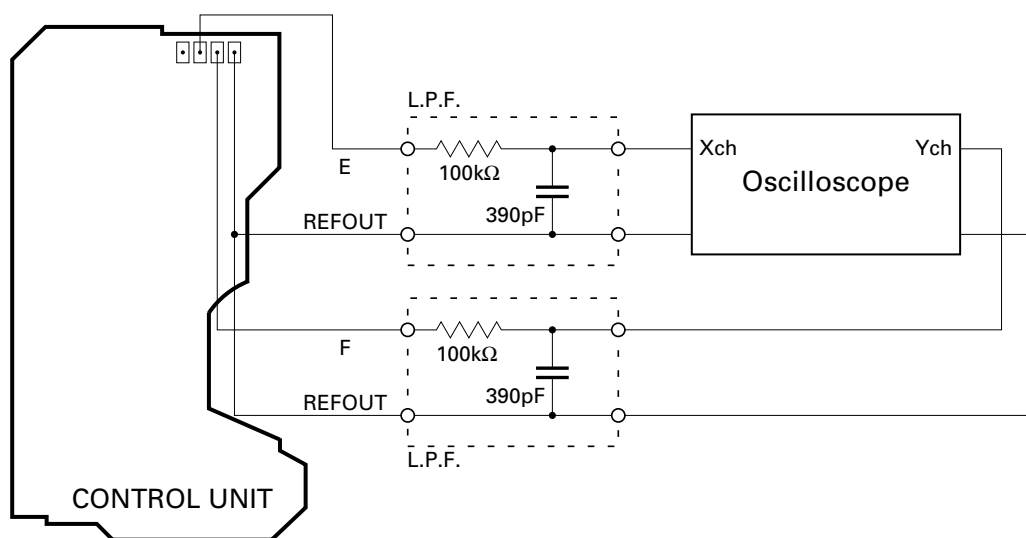
To check that the grating is within an acceptable range.

• **Symptoms of Mal-adjustment :**

If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or track searching taking a long time, may appear.

• **Method :**

- |                       |                            |
|-----------------------|----------------------------|
| • Measuring Equipment | • Oscilloscope, Two L.P.F. |
| • Measuring Points    | • E, F, REFOUT             |
| • Disc                | • ABEX TCD-784             |
| • Mode                | • TEST MODE                |



• **Checking Procedure**

1. In test mode, load the disc and switch the 5V regulator on.
2. Using the **TR+** and **TR-** buttons, move the PU unit to the innermost track.
3. Press key **3** to close focus, the display should read "91". Press key **2** to implement the tracking balance adjustment the display should now read "81". Press key **3** 4 times. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75°. Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75° try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.

• **Note**

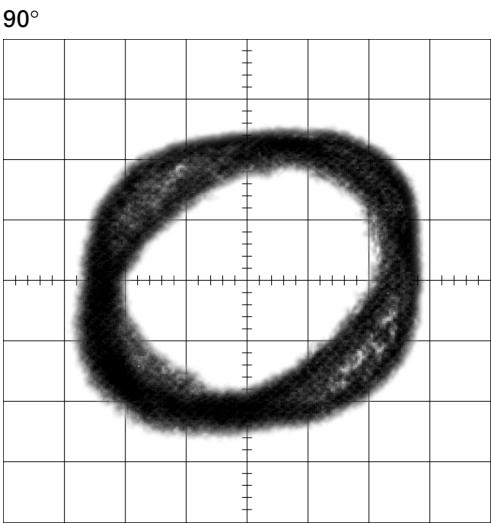
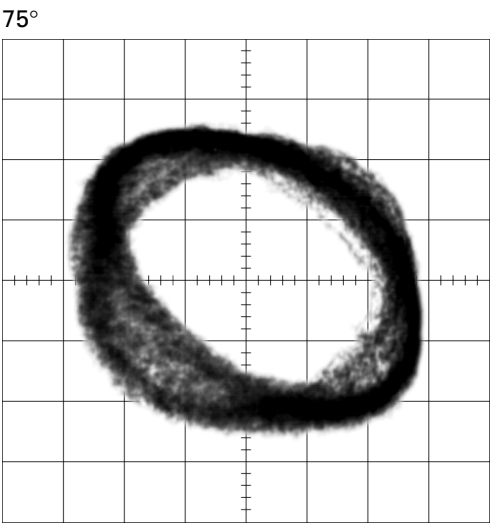
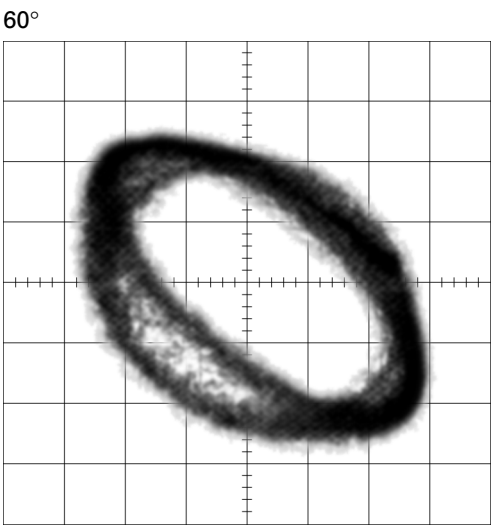
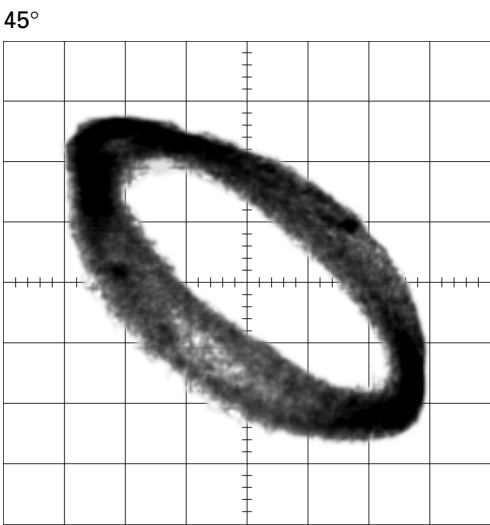
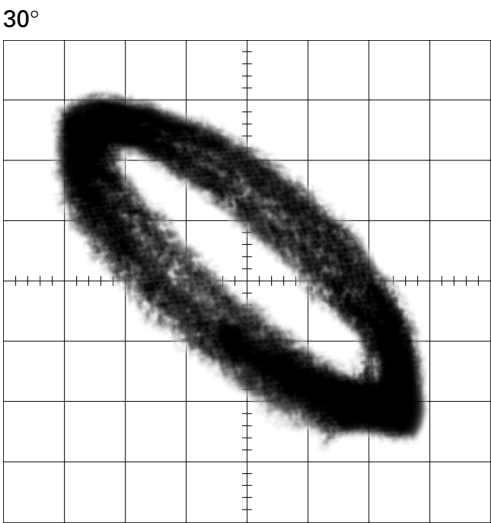
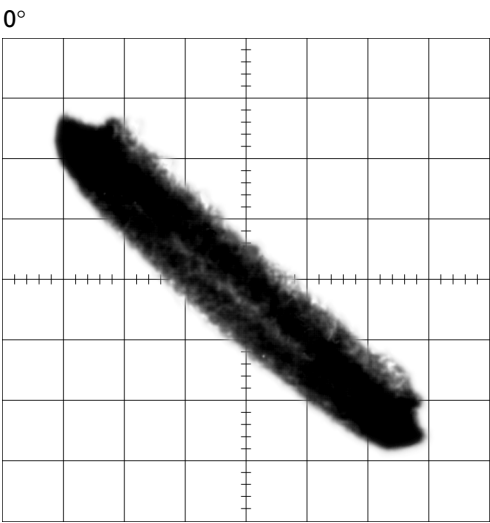
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" ( the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

• **Hint**

Reloading the disc changes the clamp position and may decrease the "wobble".

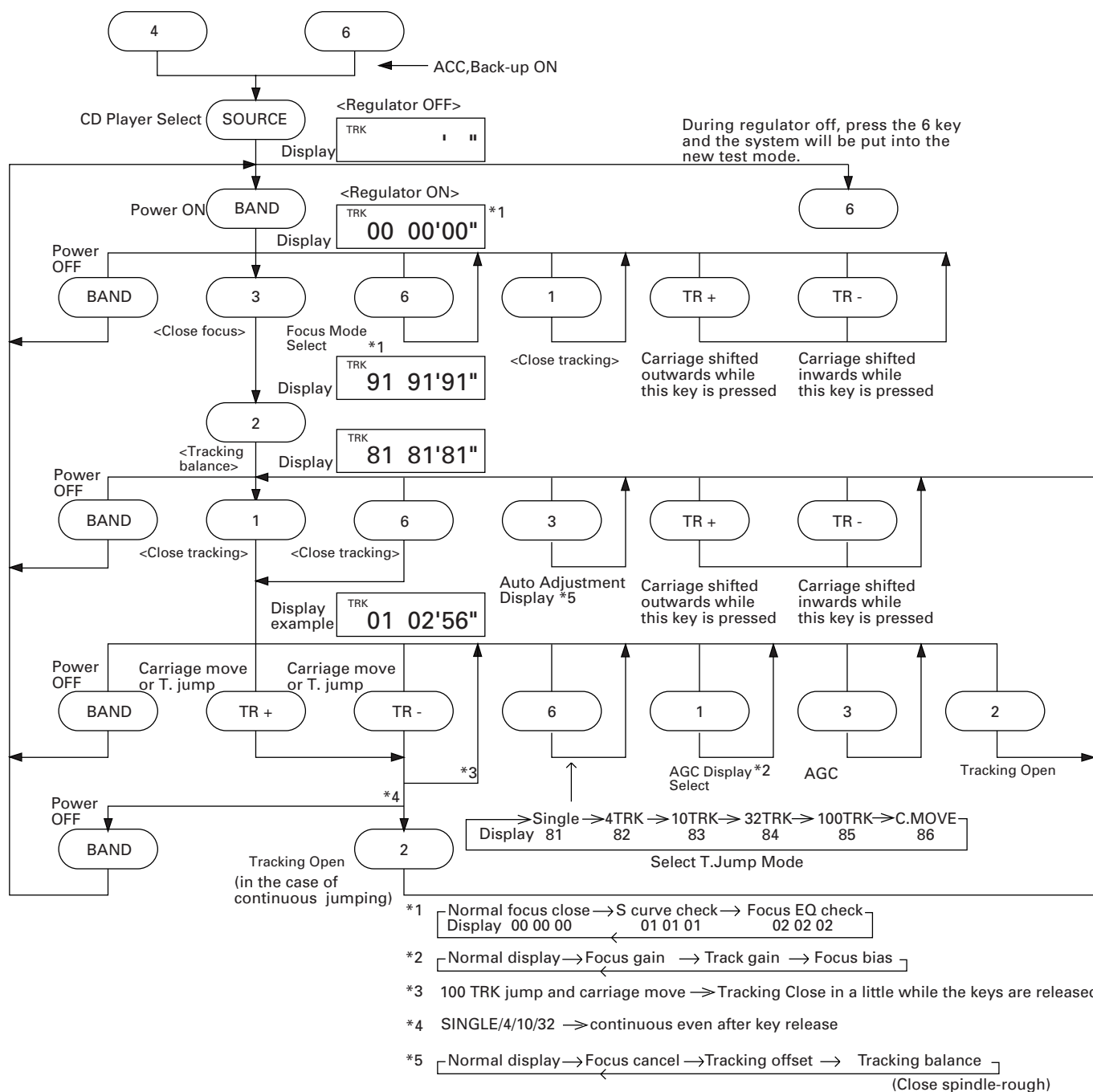
Grating waveform

Ech → Xch 20mV/div, AC  
Fch → Ych 20mV/div, AC



## 6.5 TEST MODE

### ● Flow Chart



7. GENERAL INFORMATION

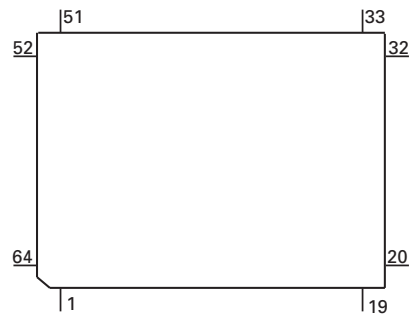
7.1 PARTS

7.1.1 IC

● Pin Functions (PD6191A)

| Pin No. | Pin Name | I/O | Format | Function and Operation                     |
|---------|----------|-----|--------|--------------------------------------------|
| 1-8     | OPEN     |     |        | Open                                       |
| 9       | OE       | O   |        | ROM output control                         |
| 10      | ROMEN    | O   |        | ROM enable                                 |
| 11      | ADD17    | O   |        | ROM address                                |
| 12      | AVCC     |     |        | Analog power supply                        |
| 13      | AVR      |     |        | 5V power supply                            |
| 14      | AVSS     |     |        | Connect to GND                             |
| 15      | IRSEL    | I   |        | Select input                               |
| 16      | RCK      | I   |        | RDS demodulation clock input               |
| 17      | RDT      | I   |        | RDS demodulation data input                |
| 18      | OPEN     |     |        | Open                                       |
| 19      | RDSLK    | I   |        | RDS LK signal input                        |
| 20      | IRRST    | I   |        | Reset input                                |
| 21      | MOD0     | I   |        | Connect to GND                             |
| 22      | MOD1     | I   |        | Connect to GND                             |
| 23      | XIN      | I   |        | Crystal oscillating element connection pin |
| 24      | XOUT     | O   |        | Crystal oscillating element connection pin |
| 25      | VSS      |     |        | GND                                        |
| 26      | DRST     | O   | C      | Reset output                               |
| 27,28   | OPEN     |     |        | Open                                       |
| 29      | IRRDY    | O   | C      | Communication ready output                 |
| 30-33   | ADD16-13 | O   |        | ROM address                                |
| 34-41   | ADD7-0   | O   |        | ROM address                                |
| 42-49   | DT7-0    | I   |        | ROM data input                             |
| 50      | VSS      |     |        | GND                                        |
| 51      | TEST     | I   |        | Test terminal                              |
| 52      | IRSCK    |     |        | Communication clock input                  |
| 53      | IRDO     | O   | C      | Communication data output                  |
| 54      | IRDI     | I   |        | Communication data input                   |
| 55,56   | OPEN     |     |        | Open                                       |
| 57      | VCC      |     |        | 5V                                         |
| 58      | SD       | I   |        | SD signal input                            |
| 59      | OPEN     |     |        | Open                                       |
| 60-64   | ADD8-12  | O   |        | ROM address                                |

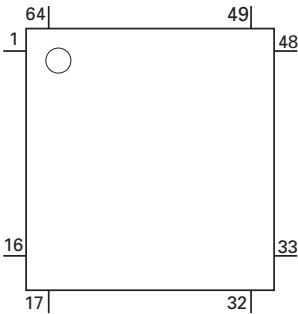
\*PD6191A



IC's marked by\* are MOS type.  
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

| Format | Meaning |
|--------|---------|
| C      | C MOS   |

\*PD4623B



● Pin Functions (PD4623B)

| Pin No. | Pin Name | I/O | Format | Function and Operation                                |
|---------|----------|-----|--------|-------------------------------------------------------|
| 1       | NC       |     |        | Not used                                              |
| 2       | XRST     | O   | C      | CD LSI reset output                                   |
| 3,4     | NC       |     |        | Not used                                              |
| 5       | DCE      | O   | C      | Chip enable output                                    |
| 6       | CRST     | O   | C      | IP-BUS reset output                                   |
| 7       | HOME     |     |        | Connect to VDD                                        |
| 8       | CLAMP    | I   |        | Disc clamp input                                      |
| 9       | VSS      |     |        | GND                                                   |
| 10      | NC       |     |        | Not used                                              |
| 11      | CDEJET   | O   | C      | Load motor eject control output                       |
| 12      | CDLOAD   | O   | C      | LOAD motor loading control output                     |
| 13      | CONT     | O   | C      | Servo driver power supply control                     |
| 14      | NC       |     |        | Not used                                              |
| 15      | CDMUTE   | O   | C      | CD mute control output                                |
| 16      | DEEM     |     |        | Not used                                              |
| 17      | ADENA    | O   | C      | A/D reference voltage control output                  |
| 18-23   | NC       |     |        | Not used                                              |
| 24      | VSS      |     |        | GND                                                   |
| 25      | DSET     |     |        | Not used                                              |
| 26      | BMUTE    |     |        | Not used                                              |
| 27-30   | NC       |     |        | Not used                                              |
| 31      | BRXEN    | I/O | C      | Reception enable input/output                         |
| 32      | BSRQ     | I   |        | P-BUS serial pole request input                       |
| 33      | VDCONT   | O   | C      | VD power control output                               |
| 34      | CD5VON   | O   | C      | CD +5V power control output                           |
| 35      | RESET    | I   |        | Reset input                                           |
| 36      | TXARI    | I   |        | VDD                                                   |
| 37      | CSENS    | I   |        | Flap close sense input                                |
| 38      | BRST     | I   |        | P-BUS reset input                                     |
| 39      | CMPARI   | I   |        | GND                                                   |
| 40      | VDD      |     |        | Power supply                                          |
| 41      | X2       |     |        | Crystal oscillator connection pin                     |
| 42      | X1       | I   |        | Crystal oscillator connection pin                     |
| 43      | IC       |     |        | Connect to GND                                        |
| 44      | NC       |     |        | Not used                                              |
| 45      | TESTIN   | I   |        | Test program start input                              |
| 46      | AVSS     | I   |        | A/D GND                                               |
| 47      | TEMP     | I   |        | Temperature sense input                               |
| 48      | VDSNS    | I   |        | VD short detection input                              |
| 49      | EJTSNS   |     |        | Disc EJECT position detect                            |
| 50      | DSCSNS   | I   |        | Disc detect                                           |
| 51      | NC       |     |        | Not used                                              |
| 52      | FOK      | I   |        | FOK signal input                                      |
| 53      | MIRR     | I   |        | Mirror detection input                                |
| 54      | LOCK     | I   |        | Spindle lock detector input                           |
| 55      | AVDD     |     |        | Power supply                                          |
| 56      | AVREF    | I   |        | A/D converter reference voltage                       |
| 57      | XSI      | I   |        | Serial data input                                     |
| 58      | XSO      | O   | C      | Serial data output                                    |
| 59      | XSCK     | O   | C      | Serial clock output                                   |
| 60      | XSTB     | O   | C      | CD LSI strobe output                                  |
| 61      | XA0      | O   |        | Control signal distinguishing data from microcomputer |
| 62      | NC       |     |        | Not used                                              |
| 63      | BDATA    | I/O | C      | P-BUS serial data input/output                        |
| 64      | BSCK     | I/O | C      | P-BUS serial clock input/output                       |

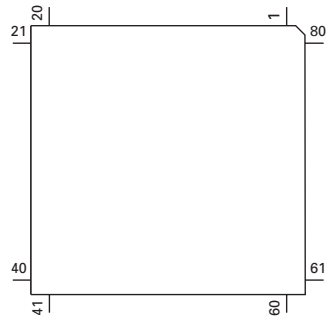
| Format | Meaning |
|--------|---------|
| C      | C MOS   |

## ● Pin Functions (PD4722B, PD4754B)

| Pin No. | Pin Name | I/O | Format | Function and Operation                              |
|---------|----------|-----|--------|-----------------------------------------------------|
| 1       | RIDRST   | O   | C      | RBDS/IDLOGIC reset output                           |
| 2       | RIDSEL   | O   | C      | RBDS/IDLOGIC select output                          |
| 3       | NC       |     |        | Not used                                            |
| 4       | AVSS     |     |        | A/D converter ground potential                      |
| 5       | VCAOUT   | O   |        | Sub woofer volume control                           |
| 6       | NC       |     |        | Not used                                            |
| 7       | AVREF    | I   |        | D/A converter reference voltage                     |
| 8       | KYDT     | I   |        | Communication data input                            |
| 9       | DPDT     | O   | C      | Communication data output                           |
| 10      | SWVDD    | O   | C      | Power supply output                                 |
| 11      | RIDDI    |     |        | RBDS/ID LOGIC communication data                    |
| 12      | RIDDO    | O   | C      | RBDS/ID LOGIC communication data output             |
| 13      | RIDCK    | O   | C      | RBDS/ID LOGIC communication clock output            |
| 14      | BRST     | O   | C      | P-BUS reset output                                  |
| 15      | BRXEN    | I/O | C      | P-BUS enable input/output                           |
| 16      | BSRQ     | I   |        | P-BUS serial pole request input                     |
| 17      | BSIO     | I/O | C      | P-BUS serial data input/output                      |
| 18      | BSCK     | I/O | C      | P-BUS serial clock input/output                     |
| 19      | VST      | O   | C      | Strobe pulse output for electronic volume           |
| 20      | VDT      | O   | C      | Data output for electronic volume                   |
| 21      | VCK      | O   | C      | Clock output for electronic volume                  |
| 22      | DRELAY   | O   | C      | External relay output                               |
| 23      | DRSYS    | O   | C      | Door system select output                           |
| 24      | STOUT    | O   | C      | Starter cut output                                  |
| 25,26   | NC       |     |        | Not used                                            |
| 27      | TUNPCK   | O   | C      | PLL IC clock                                        |
| 28      | TUNPDO   | O   | C      | PLL IC data output                                  |
| 29      | TUNPCE   | O   | C      | PLL IC chip enable                                  |
| 30      | TUNPDI   | I   |        | PLL IC data input                                   |
| 31      | DRSENS   |     |        | Door open/close sense                               |
| 32      | DLSSENS  |     |        | Door lock sense                                     |
| 33      | VSS      |     |        | GND                                                 |
| 34      | MUTE     | O   | C      | Mute output                                         |
| 35      | FIEOUT   | O   | C      | FIE ON/OFF control output                           |
| 36      | SUBW0    | O   | N      | Sub woofer control 0                                |
| 37      | SUBW1    | O   | N      | Sub woofer control 1                                |
| 38      | DLED     | O   | N      | Alarm LED output                                    |
| 39      | TMUTE    | O   | N      | Tuner mute output                                   |
| 40      | BMUTE    | O   | C      | Bus mute output                                     |
| 41      | ASENBO   | O   | C      | Slave power supply control output                   |
| 42      | ILMPW    | O   | C      | Illumination power supply control output            |
| 43      | FM       | O   | C      | FM power control output                             |
| 44      | AM       | O   | C      | AM power control output                             |
| 45      | PEE      | O   | C      | Beep tone output                                    |
| 46      | TUNPW    | O   | C      | Tuner power control output                          |
| 47      | SYSPW    | O   | C      | System power control output                         |
| 48      | CDPW     | O   | C      | CD power control                                    |
| 49      | PCL      | O   | C      | Clock adjustment output                             |
| 50      | LCDPW    | O   | C      | LCD back light power supply control output          |
| 51      | DIMMER   | O   | C      | Dimmer output                                       |
| 52      | SD       | I   |        | FM SD input                                         |
| 53      | ST       | I   |        | FM stereo input                                     |
| 54      | TSENS    | I   |        | Illumination sense input                            |
| 55      | NC       |     |        | Not used                                            |
| 56      | TX       | O   | C      | IP BUS data output                                  |
| 57      | RX       | I   |        | IP BUS data input                                   |
| 58      | IPPW     | O   | C      | Power supply control output for IP BUS interface IC |
| 59      | NC       |     |        | Not used                                            |

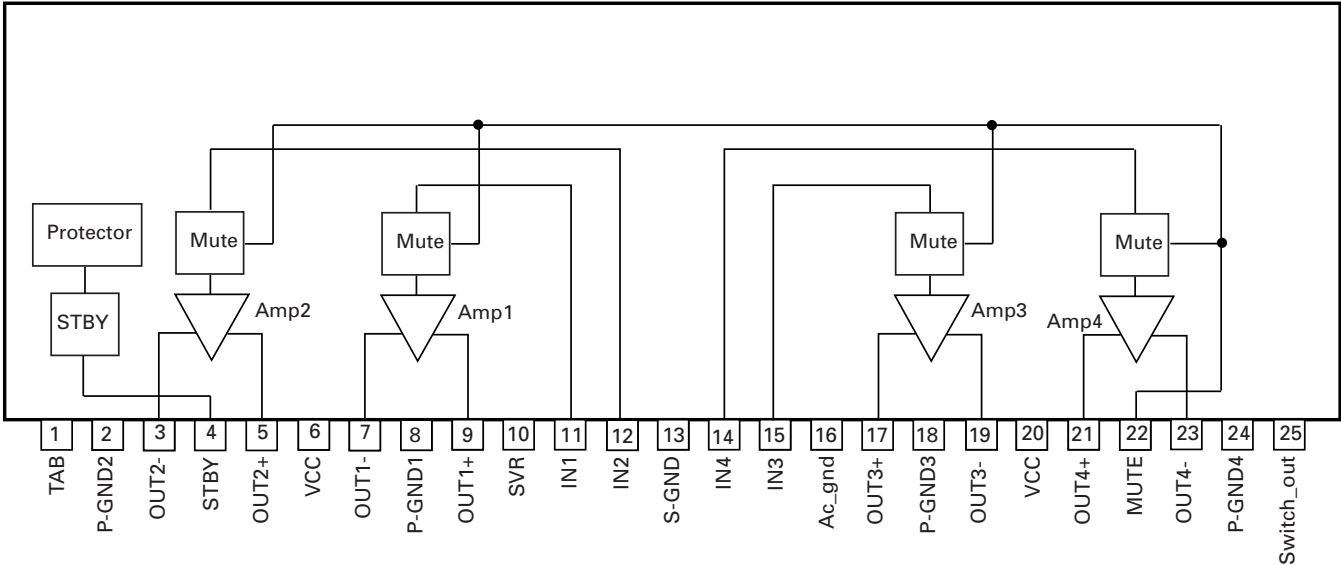
| Pin No. | Pin Name | I/O | Format | Function and Operation                          |
|---------|----------|-----|--------|-------------------------------------------------|
| 60      | RESET    | I   |        | Reset input                                     |
| 61      | RIDRDY   | I   |        | Ready input                                     |
| 62      | BSENS    | I   |        | Back up power sense input                       |
| 63      | ASENS    | I   |        | ACC power sense input                           |
| 64      | DSENS    | I   |        | Grille detach sense                             |
| 65      | MOSENS   | I   |        | Sensor input                                    |
| 66      | NC       |     |        | Not used                                        |
| 67      | CLKIN    | I   | C      | Clock input                                     |
| 68      | VDD      |     |        | Power supply                                    |
| 69      | X2       |     |        | Crystal oscillator connection pin               |
| 70      | X1       |     |        | Crystal oscillator connection pin               |
| 71      | IC       |     |        | GND                                             |
| 72      | XT2      |     |        | Not used                                        |
| 73      | TESTIN   | I   | C      | Test program mode input                         |
| 74      | AVDD     |     |        | A/D converter power supply                      |
| 75      | AVREF0   |     |        | A/D converter standard voltage input            |
| 76      | SL       | I   |        | Signal level input                              |
| 77      | SEL0     | I   |        | Model select pin                                |
| 78,79   | NC       |     |        | Not used                                        |
| 80      | ADPW     | O   | C      | Control output for analog input reference power |

\*PD4722B,PD4754B



| Format | Meaning        |
|--------|----------------|
| C      | C MOS          |
| N      | Nch open drain |

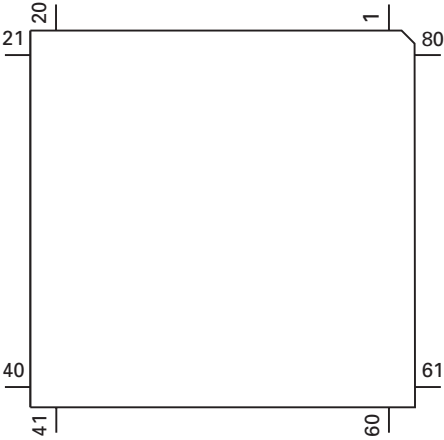
PAL005A



● Pin Functions (PD6197A)

| Pin No. | Pin Name | I/O | Function and Operation            |
|---------|----------|-----|-----------------------------------|
| 1       | VSS      |     | GND                               |
| 2       | X1       |     | Crystal oscillator connection pin |
| 3       | X0       |     | Crystal oscillator connection pin |
| 4       | NC       |     | Not used                          |
| 5,6     | MOD1,0   | I   | Connect to GND                    |
| 7       | NC       |     | Not used                          |
| 8       | KYDT     | O   | Display/key data output           |
| 9       | DPDT     | I   | Display/key data input            |
| 10      | REMIN    | I   | Remote control pulse input        |
| 11,12   | NC       |     | Not used                          |
| 13-16   | KD4-KD1  | I   | Key data input                    |
| 17-21   | KS6-KS2  | O   | Key strobe output                 |
| 22      | NC       |     | Not used                          |
| 23      | VDD      |     | VDD                               |
| 24-73   | SEG0-49  | O   | LCD segment output                |
| 74-77   | COM3-0   | O   | LCD common output                 |
| 78      | VLCD     | I   | LCD voltage input                 |
| 79,80   | V2,V1    |     | Power supply terminal             |

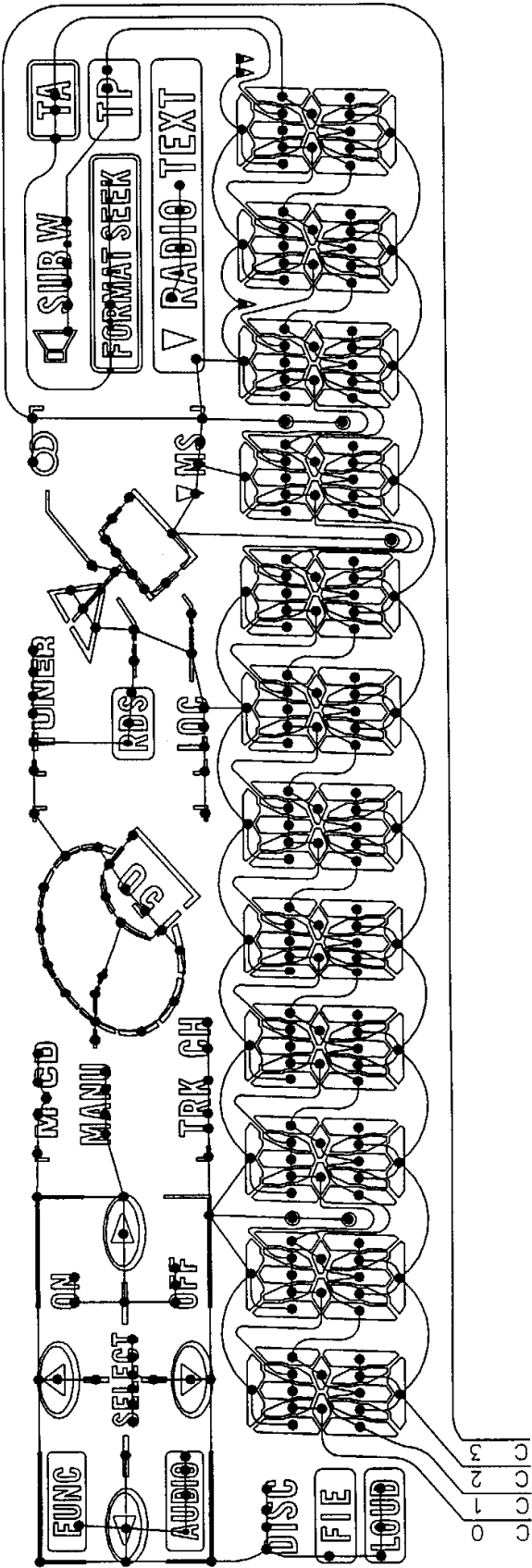
\*PD6197A



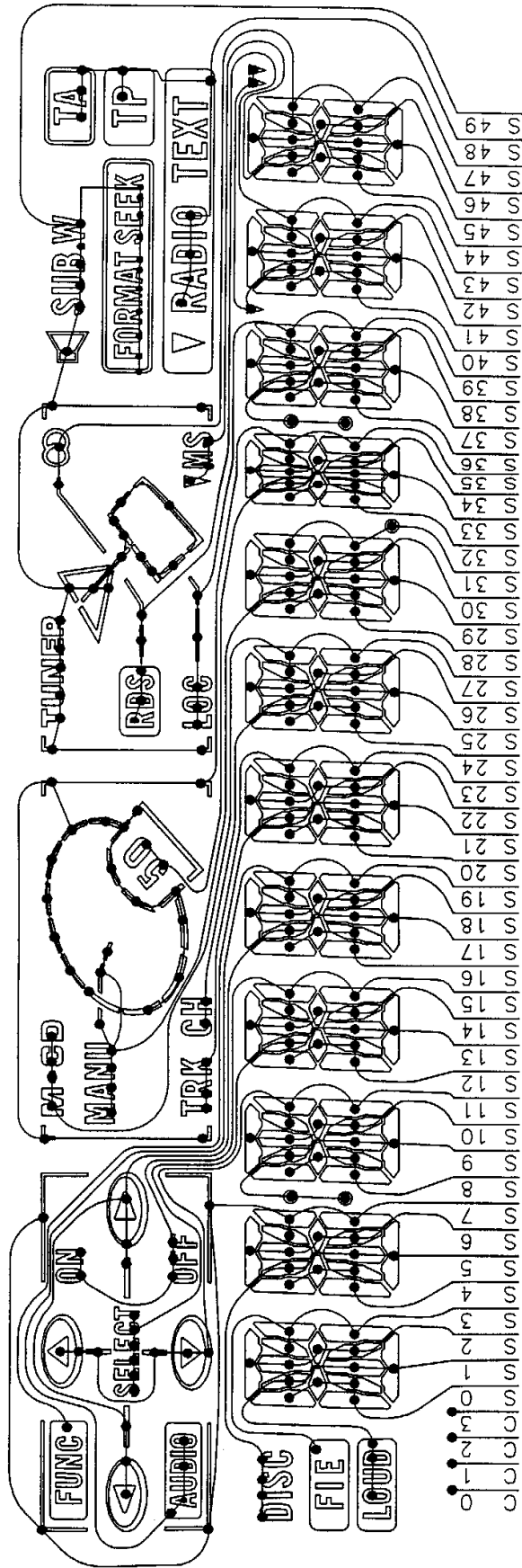
7.1.2 DISPLAY

● LCD(CAW1389, CAW1390)

COMMON



SEGMENT



## 7.2 DIAGNOSIS

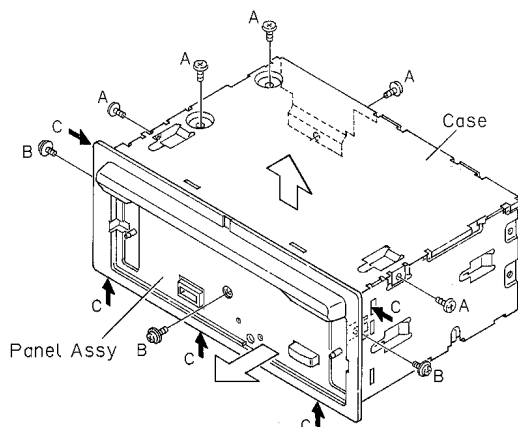
### 7.2.1 DISASSEMBLY

#### ● Removing the Case

- 1.Remove the five screws A, and then remove the case.

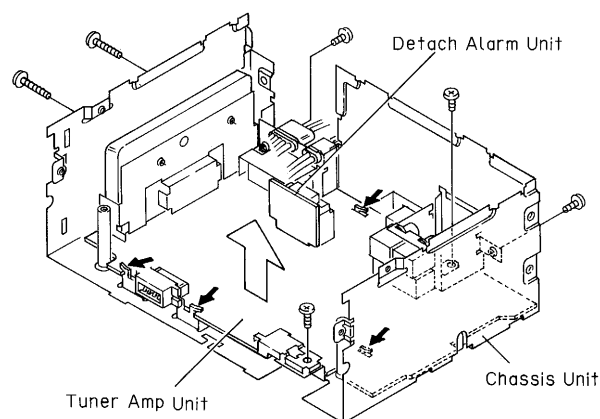
#### ● Removing the Panel Assy

- 1.Remove the three screws B.
- 2.Disconnect the five stoppers C, and then remove the panel assy.



#### ● Removing the Tuner Amp Unit

- 1.Remove the six screws.
- 2.Stretch the four claws, and then remove the tuner amp unit.

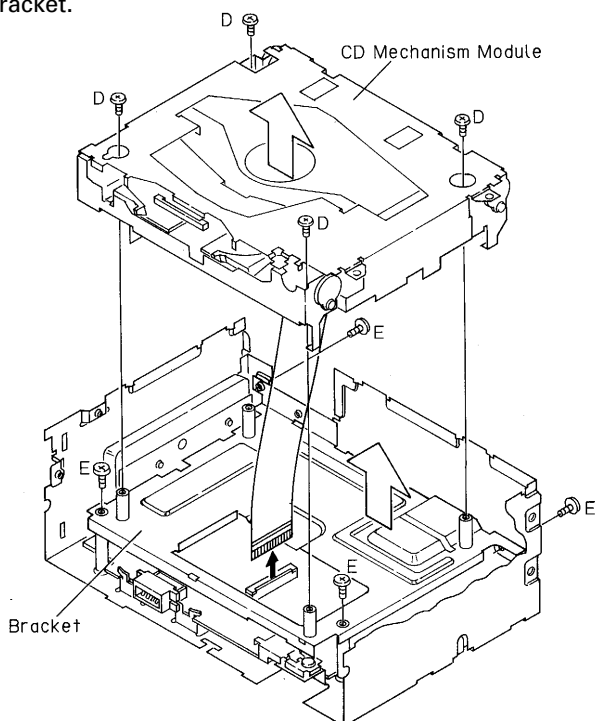


#### ● Removing the CD Mechanism Module

- 1.Remove the four screws D.
- 2.Disconnect the connector indicated by arrow.
- 3.Remove the CD mechanism module.

#### ● Removing the Bracket

- 1.Remove the four screws E, and then remove the bracket.



## 7.2.2 TEST MODE

### ● Error Number Indication

If the CD should fail to operate or if an error has taken place during operation the player will enter into the error mode, and the cause of the error will be numerically indicated.

This is aimed at assisting in analysis or repair.

#### (1) Examples of Display

- ERROR- XX

#### (2) Error Codes

| Error Code | Classification | Description                             | Cause/Detail                                                                                                                 |
|------------|----------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 10         | ELECTRIC       | Carriage home failure                   | Carriage doesn't move to or from the innermost position<br>— Home switch failed and/or carriage immobile                     |
| 11         | ELECTRIC       | Focus failure                           | Focus failed<br>— Defects, disc upside-down, severe vibration                                                                |
| 12         | ELECTRIC       | Spindle lock failure<br>Subcode failure | Spindle failed to lock or subcode unreadable<br>— Spindle defective, defect, severe vibration                                |
| 14         | ELECTRIC       | Mirror failure                          | Unrecorded CD-R<br>The disc is upside-down, defects, vibration                                                               |
| 17         | ELECTRIC       | Set up failure                          | AGC protect failed<br>— Defects, disc upside-down, severe vibration                                                          |
| 19         | ELECTRIC       | Set up failure                          | Tracking error waveform is too unbalanced (>50%) or level is too small<br>— The P.U.unit or tracking error circuitry is N.G. |
| 30         | ELECTRIC       | Search time out                         | Failed to reach target address<br>— Carriage/tracking defective and/or defects                                               |
| A0         | SYSTEM         | Power failure                           | Power overvoltage or short circuit detected<br>— Switching transistor defective and/or power abnormal                        |

### ● New Test Mode(aging operation and setup analysis)

The single CD player plays in normal mode. After being set up, it will display FOK (focus), LOCK (spindle), subcode, sound skip, protection against a mechanical error or the like, occurrence of an error, cause and time of an expiry, if any, (and disk number)

During the setup, the CD software operation status (internal RAM and C-point) is displayed.

#### (1) How to enter NEW TEST Mode

See the test mode flow chart Page 59.

**(2) Relations of keys between TEST and NEW TEST Modes**

| Keys | Test Mode           |                      | New Test Mode      |                                            |
|------|---------------------|----------------------|--------------------|--------------------------------------------|
|      | Regulator OFF       | Regulator ON         | PLAY in progress   | Error Occurred, Protection Activated       |
| BAND | Regulator ON        | Regulator OFF        | —                  | Time of occurrence / cause of error select |
| TR+  | —                   | FWD-Kick             | TRACK UP / FF      | —                                          |
| TR-  | —                   | REV-Kick             | TRACK<br>DOWN /REV | —                                          |
| 1    | —                   | Tracking close       | SCAN               | —                                          |
| 2    | —                   | Tracking open        | REPEAT             | —                                          |
| 3    | —                   | Focus close          | RANDOM             | —                                          |
| 6    | To New Test<br>Mode | Focus Mode<br>Select | AUTO/MANU          | —                                          |

Operations, such as EJECT, CD ON/OFF, etc. are performed normally

**(3) Error Cause (Error Number) Code**

| Error Code | Classification | Mode | Description                   | Cause                           | Detail                                                      |
|------------|----------------|------|-------------------------------|---------------------------------|-------------------------------------------------------------|
| 40         | ELECTRIC       | PLAY | FOK=L 100ms                   | Put out of focus                | Scratch,<br>Stain,<br>Vibration,<br>Servo defect,<br>etc... |
| 41         | ELECTRIC       | PLAY | LOCK=L 100ms                  | Spindle unlock                  |                                                             |
| 42         | ELECTRIC       | PLAY | Subcode<br>unacceptable 500ms | Failed to read subcode          |                                                             |
| 43         | ELECTRIC       | PLAY | Sound skipped                 | Last address memory<br>operated |                                                             |

**(4) Indicating an Operation Status During Setup**

| Status No. | Description                                                                 | Protection operation                                                 |
|------------|-----------------------------------------------------------------------------|----------------------------------------------------------------------|
| 01         | Carriage home mode started                                                  | None                                                                 |
| 02         | Carriage moving inwards                                                     | 10-second time out, Home switch failed                               |
| 03         | Carriage moving outwards                                                    | 10-second time out, Home switch failed                               |
| 05         | Carriage moving outwards                                                    | None                                                                 |
| 11         | Setup started                                                               | None                                                                 |
| 12         | Spindle turn/Focus search started                                           | None                                                                 |
| 13         | Waiting for focus closure (XSI=L)                                           | Failure to close focus                                               |
| 10,14      | Waiting for focus closure (FOK=H)                                           | Failure to close focus                                               |
| 15, 16, 17 | Focus closed, Tracking open                                                 | Focus disrupted                                                      |
| 18         | During focus AGC<br>Subcode waiting                                         | Focus disrupted                                                      |
| 19         | During tracking AGC                                                         | Disrupted focus                                                      |
| 20         | Waiting for MIRR, LOCK or subcode read<br>Carriage closed, SPINDLE=ADAPTIVE | Focus disrupted, MIRR NG, Failure to lock,<br>Failed to read subcode |

**(5) Example of Display.**

- SET UP in progress  
8 digits display LCD

| TNo. | Min | Sec |
|------|-----|-----|
| 11   | 11  | 11  |

- Operation (PLAY, SEARCH, etc.) in progress perfectly identical with that in the normal mode.

- Protection/Error upon occurrence(8 digits display LCD)

(a) Error number indicated

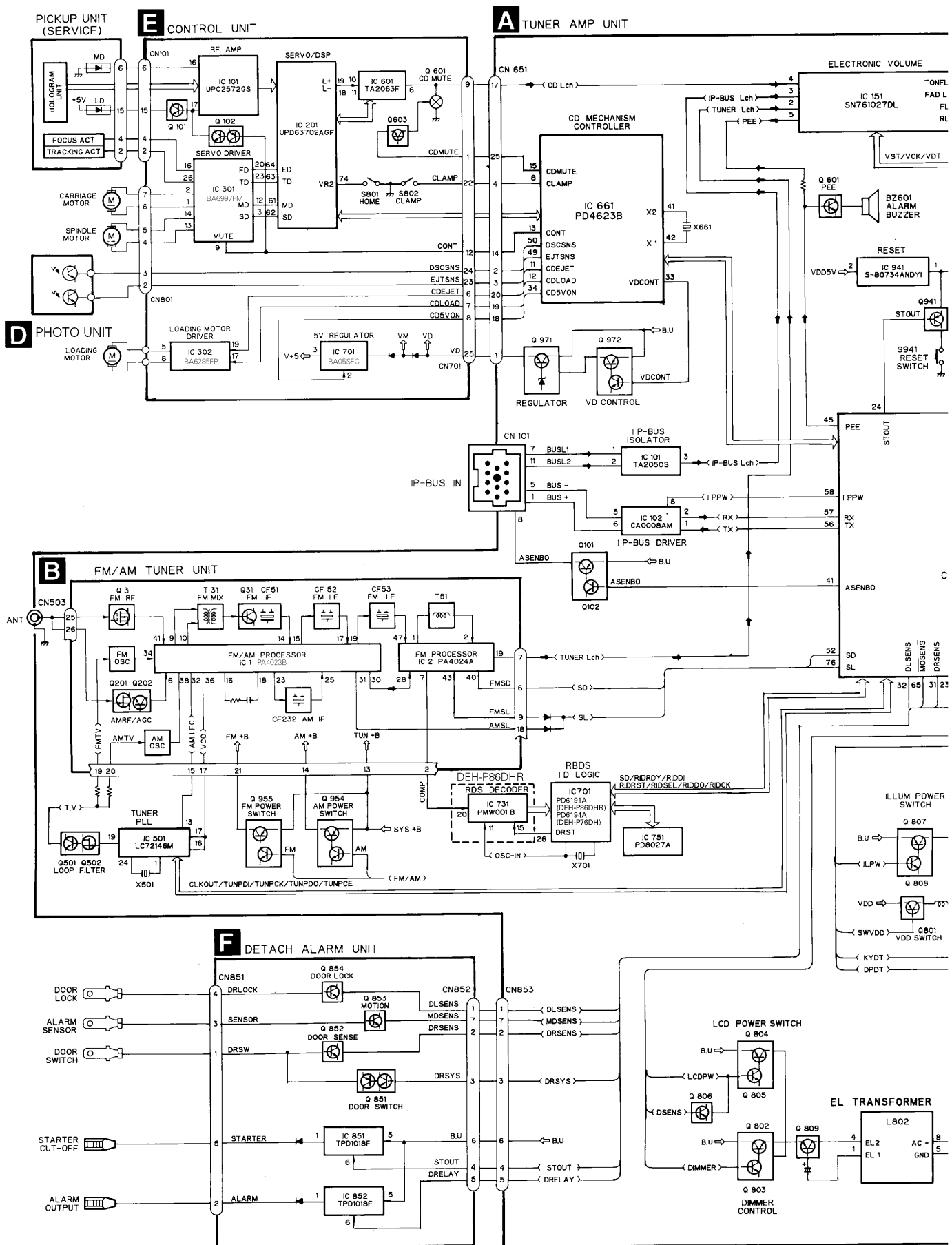
|          |
|----------|
| ERROR-xx |
|----------|

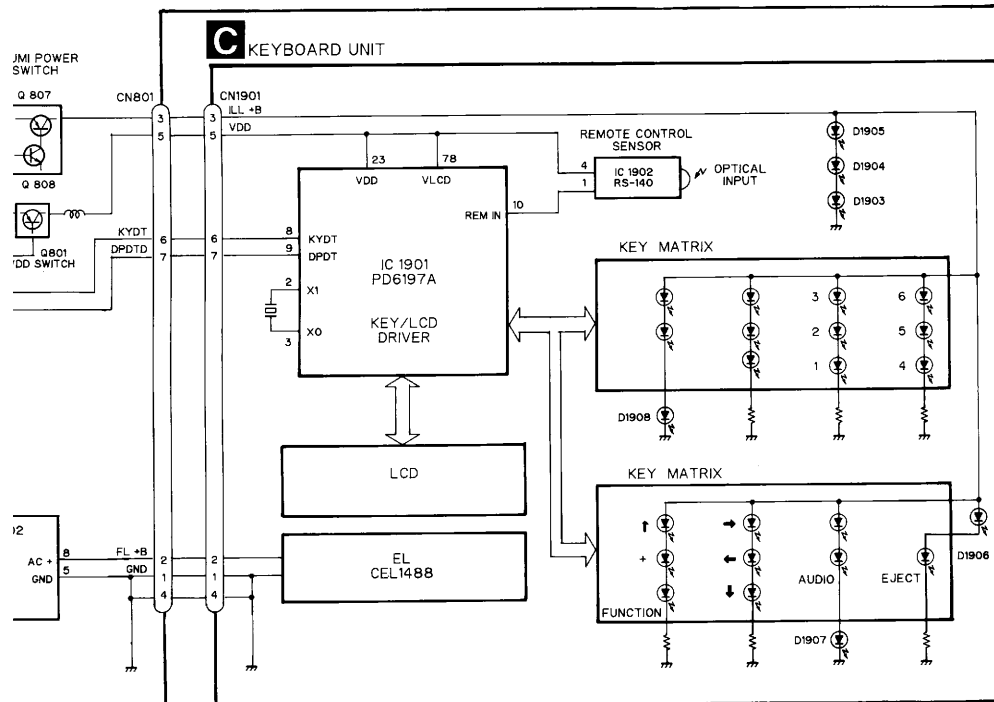
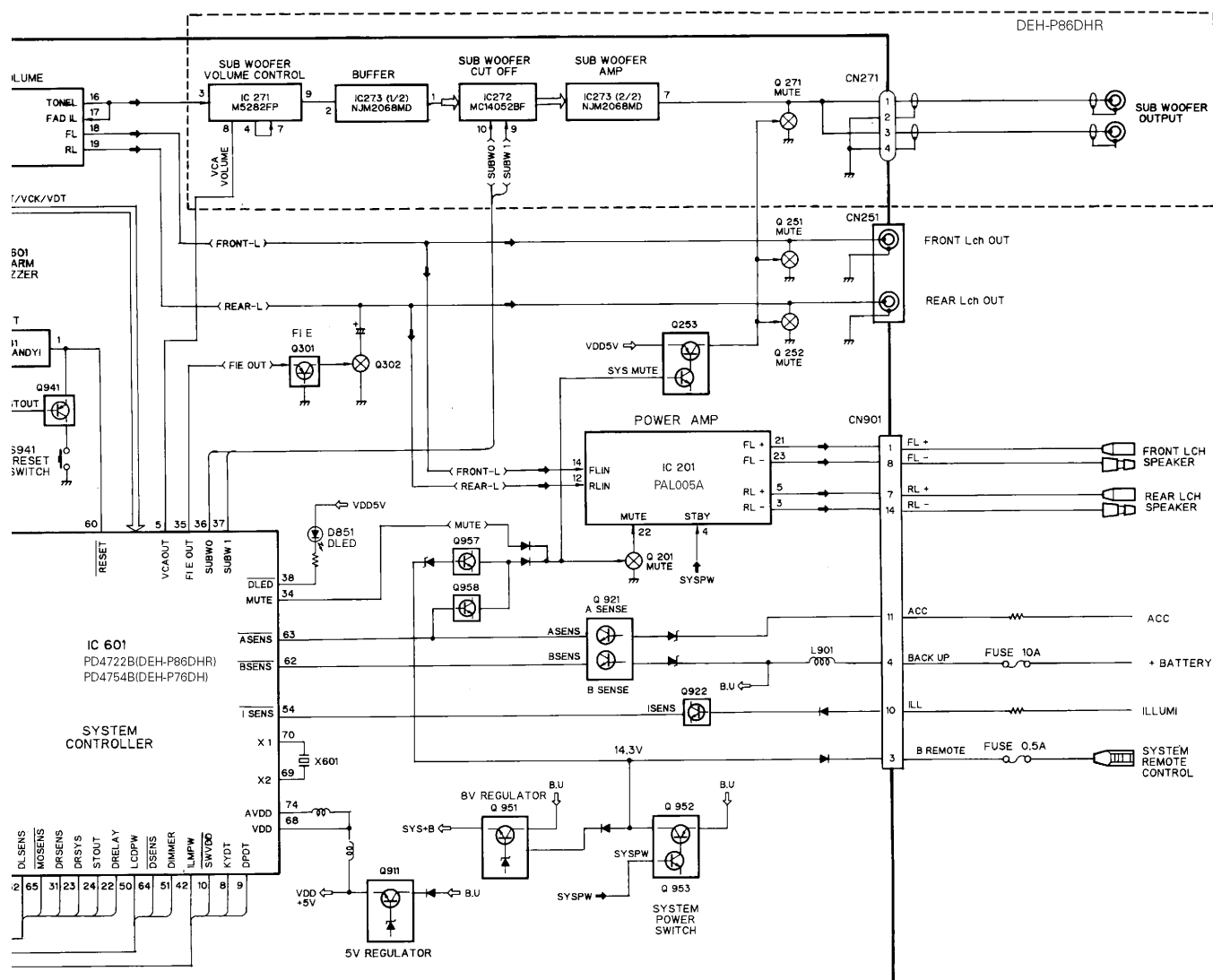
Select the display with the  
BAND key.

(b) Track number and  
absolute time indicated

| TNo. | Min | Sec |
|------|-----|-----|
| 10   | 40  | 05  |

### 7.3 BLOCK DIAGRAM

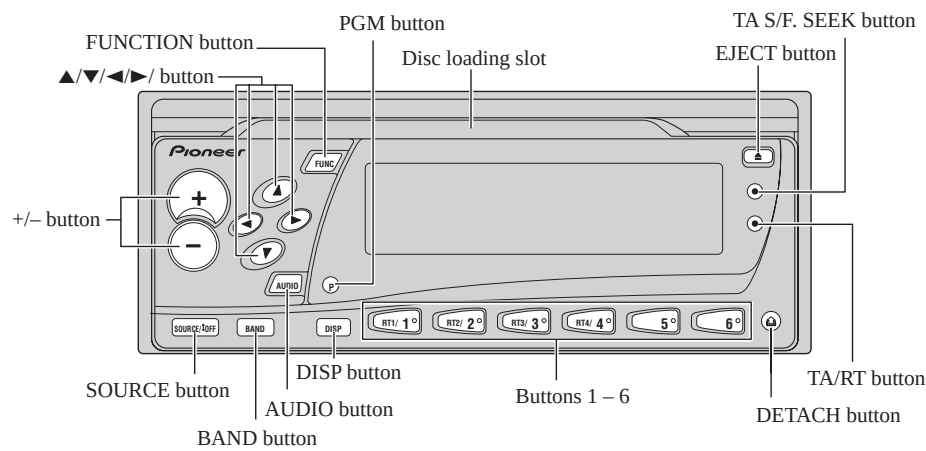




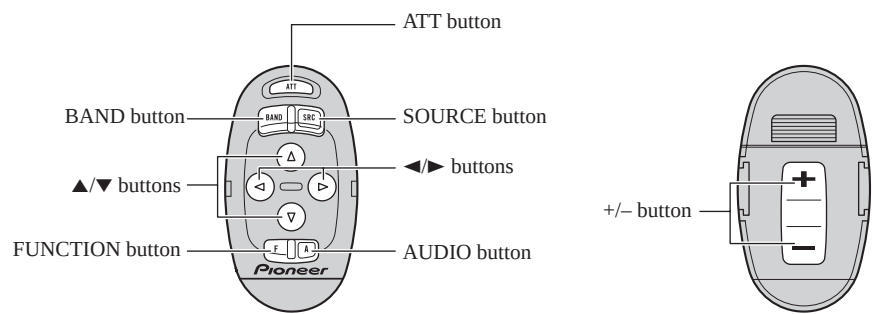
8. OPERATIONS AND SPECIFICATIONS

Key Finder

Head Unit (DEH-P86DHR)

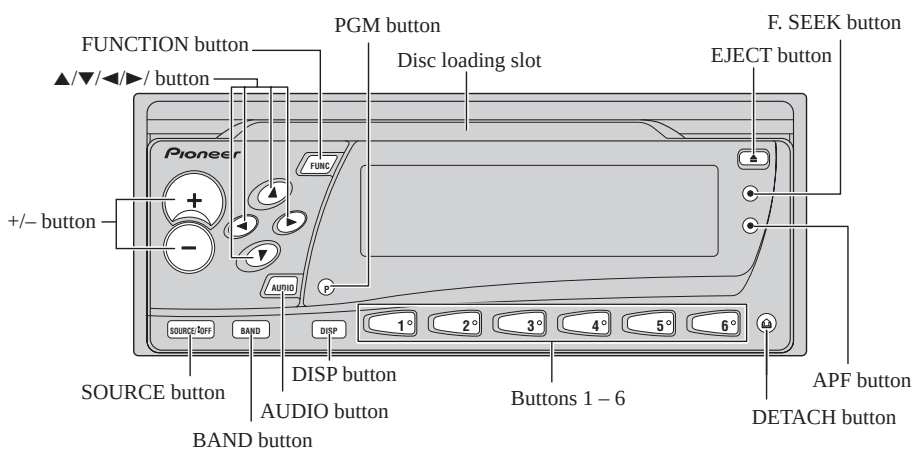


Steering Remote Controller

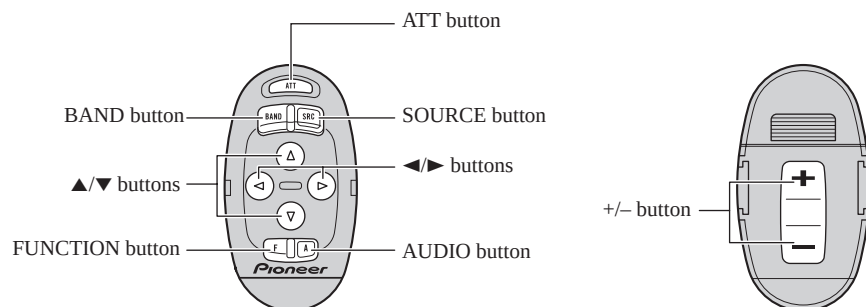


## Key Finder

### Head Unit(DEH-P76DH)



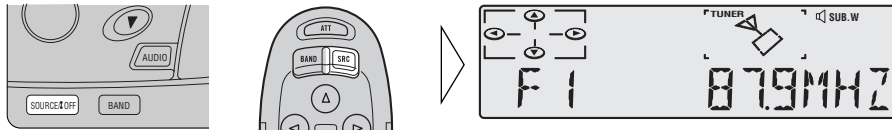
### Steering Remote Controller



## Basic Operation

### Switching Power ON/OFF

- Select the desired source (such as the tuner).



Each press of the SOURCE button selects the desired source in the following order:

Built-in CD player → Tuner → Multi-CD player → AUX

To switch the sources OFF, hold down the SOURCE button for 1 second or more.

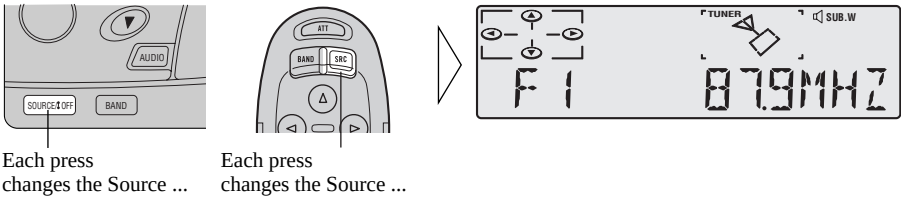
**Note:**

- In the following cases, the sound source will not change:
  - \* No disc is set in this product.
  - \* No Multi-CD player is connected to this product. (When “M-CD” display is OFF)
  - \* No magazine is set in the Multi-CD player.
  - \* AUX (external input) is set to OFF.

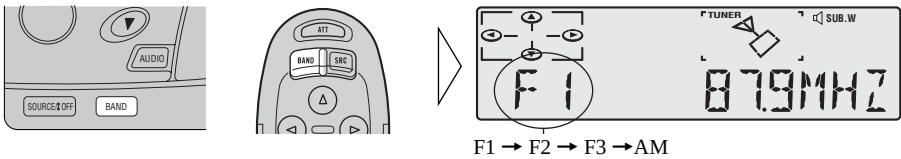
Tuner Operation

Basic Operation of Tuner

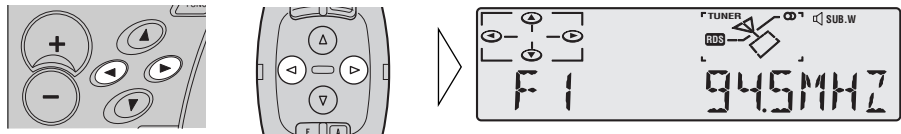
1. Select Tuner.



2. Select the desired band.



3. Tune the receiver to a higher or lower frequency.

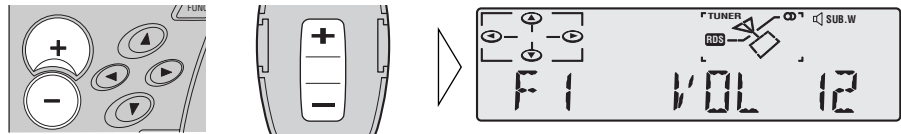


This product’s tuner lets you select the tuning by changing the length of the time you press the button.

|                              |                     |
|------------------------------|---------------------|
| Manual Tuning (step by step) | 0.3 seconds or less |
| Seek Tuning (automatically)  | 0.3 – 2 seconds     |
| Manual Tuning (continuously) | 2 seconds or more   |

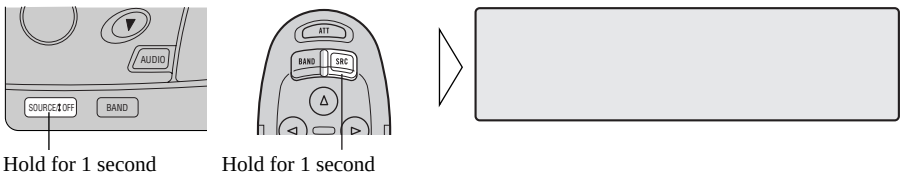
- Note:**
- “” indicator lights when a stereo station is selected.
  - “RDS” indicator lights when a RDS station is selected.

4. Raise or lower the volume.



Continued overleaf

5. Turn the source OFF.

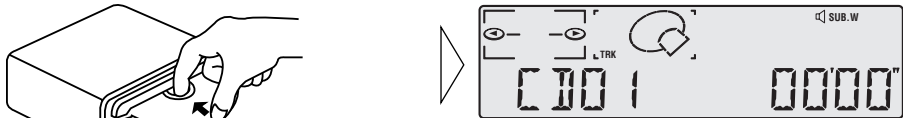


*Using the Built-in CD Player*

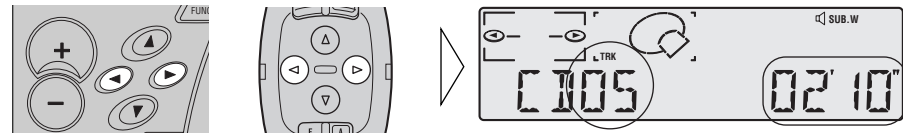
**Basic Operation of Built-in CD Player**

The built-in CD player plays one standard 12 cm or 8 cm (single) CD at a time. Do not use an adapter when playing 8 cm CD.

1. Insert the disc with the recorded (iridescent) surface down.



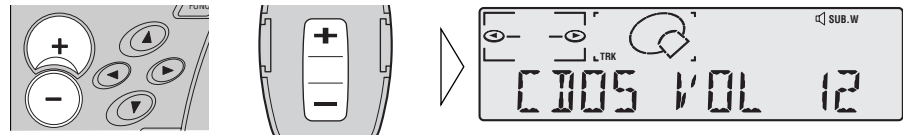
2. Select the desired track (and phrase).



This product's built-in CD player lets you select the track search function or fast-forward/reverse function by changing the length of the time you press the button.

|                      |                     |
|----------------------|---------------------|
| Track Search         | 0.5 seconds or less |
| Fast-forward/Reverse | Continue pressing   |

3. Raise or lower the volume.



4. Remove the disc.



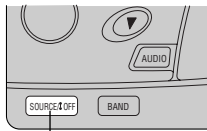
- Note:**
- The CD function can be turned ON/OFF with the disc remaining in this product.
  - Discs left partially inserted after ejection may incur damage or fall out.
  - If a disc cannot be inserted fully or playback fails, make sure the recorded side is down, push the EJECT button and check the disc for damage before reinserting it.
  - If a CD is inserted with the recorded side up, it will be ejected automatically after a few moments.
  - If the built-in CD player cannot operate properly, an error message (such as "ERROR-14") appears on the display.

Using Multi-CD Players

Basic Operation of Multi-CD Players

This product can control one or more multi-CD players.

1. Select the multi-CD player source.



Each press  
changes the Source ...

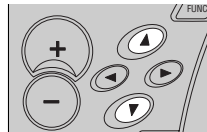


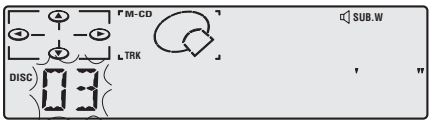
Each press  
changes the Source ...



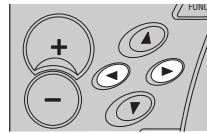
- Note:**
- The multi-CD player may perform a preparatory operation, such as verifying the presence of a disc or reading disc information, when the power is turned ON or a new disc is selected for playback. "READY" is displayed.
  - If the multi-CD player cannot operate properly, an error message such as "ERROR-14" is displayed. Refer to the multi-CD player owner's manual.
  - If there are no discs in the multi-CD player magazine, "NO DISC" is displayed.

2. Select the desired disc.





3. Select the desired track (and phrase).



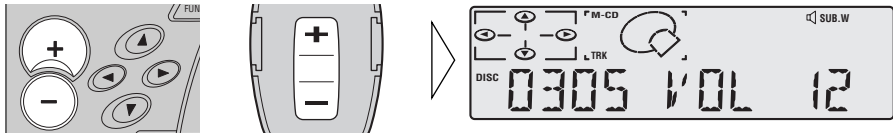


This product lets you select the track search function or fast-forward/reverse function by changing the length of the time you press the button.

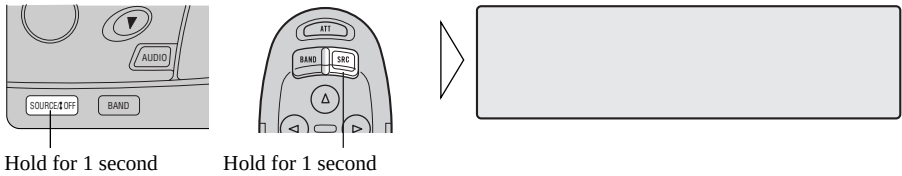
|                      |                     |
|----------------------|---------------------|
| Track search         | 0.5 seconds or less |
| Fast-forward/Reverse | Continue pressing   |



4. Raise or lower the volume.



5. Turn the source OFF.



**Playing Discs on a 50-Disc Type Multi-CD Player**

When a magazine is loaded into a 50-Disc type Multi-CD Player, information on all the discs in the magazine is read.

If you start playing a disc on a 50-Disc type Multi-CD Player before reading of information on all discs has been completed, reading of information stops part way through. This will prevent you from using a number of functions. (If you try and use these functions, “NOT RDY” is displayed.)

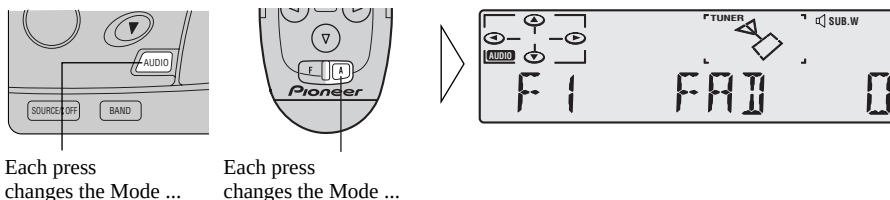
If this happens, reading of information begins again when you switch to a component other than the 50-Disc type Multi-CD Player.

## Audio adjustment

### Entering the Audio Menu

In this menu, you can adjust sound quality such as fader/balance, bass/treble and sub-woofer settings.

- **Select the mode you want to adjust in Audio Menu.**



Each press of the AUDIO button selects the mode in the following order:  
FAD → BAS → TRE → LOUD → SUB.W → (80HZ 0) → FIE

To cancel the Audio Menu, press the BAND button.

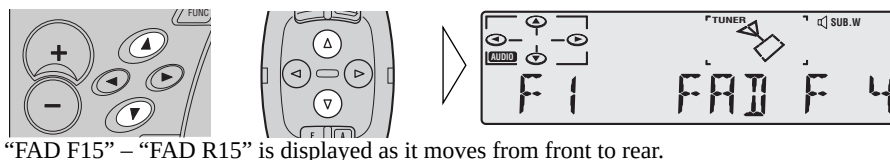
**Note:**

- You can select the “80HZ 0” mode only when sub-woofer output is switched ON in the SUB.W mode. Initially, sub-woofer output is ON.
- After entering the Audio Menu, if you do not perform an operation within 30 seconds, the Audio Menu is automatically canceled.

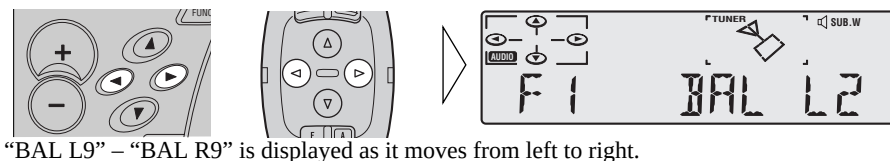
### Balance Adjustment

This function allows you to select a Fader/Balance setting that provides ideal listening conditions in all occupied seats.

1. **Select the Fader/Balance mode (FAD) in the Audio Menu.**
2. **Shift the balance progressively to the front or rear speakers.**



3. **Shift the balance to the left or right speaker, respectively.**



To cancel the Audio Menu, press the BAND button.

**Note:**

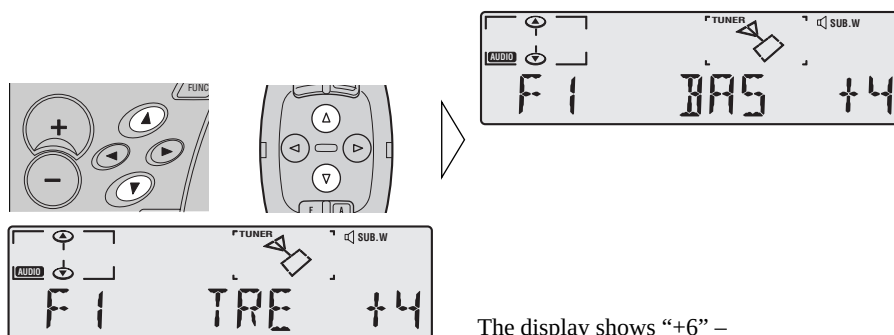
- “FAD 0” is the proper setting when 2 speakers are in use.

## Audio adjustment

### Bass/Treble Adjustment

This product is equipped with two tone adjustment modes, the Bass (BAS) and Treble (TRE) modes.

1. Select bass mode (BAS) or treble mode (TRE) in the Audio Menu.
2. Increase or decrease the intensity of the bass or treble, whichever is selected.



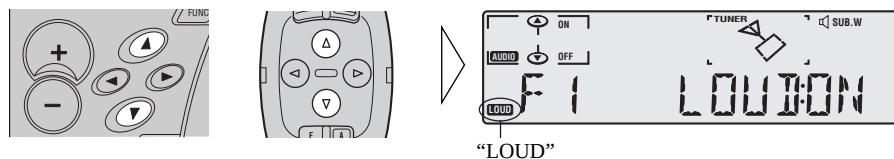
3. Repeat steps 1 – 2 above for the other Bass or Treble adjustment.

To cancel the Audio Menu, press the BAND button.

### Loudness Adjustment

The Loudness function compensates for deficiencies in the low and high sound ranges at low volume.

1. Select the Loudness mode (LOUD) in the Audio Menu.
2. Switch the Loudness function ON or OFF.



To cancel the Audio Menu, press the BAND button.

## Specifications

### General

|                                |                                                                          |
|--------------------------------|--------------------------------------------------------------------------|
| Power source .....             | 14.4 V DC (10.8 – 15.1 V allowable)                                      |
| Grounding system .....         | Negative type                                                            |
| Max. current consumption ..... | 10.0 A                                                                   |
| Dimensions                     |                                                                          |
| (mounting size) .....          | 198 (W) × 78 (H) × 135 (D) mm<br>[7-3/4 (W) × 3-1/8 (H) × 5-3/8 (D) in.] |
| (nose) .....                   | 190 (W) × 62 (H) × 21 (D) mm<br>[7-1/2 (W) × 2-1/2 (H) × 7/8 (D) in.]    |
| Weight .....                   | 2.1 kg (4.6 lbs)                                                         |

### Amplifier

|                                                                                                                              |                                                       |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Continuous power output is 22 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD. |                                                       |
| Maximum power output .....                                                                                                   | 45 W × 4                                              |
| Load impedance .....                                                                                                         | 4 Ω (4 – 8 Ω allowable)                               |
| Preout maximum output level/                                                                                                 |                                                       |
| output impedance .....                                                                                                       | 1.8 V/1 kΩ                                            |
| Sub-woofer output                                                                                                            |                                                       |
| Crossover frequency .....                                                                                                    | 50 Hz, 80 Hz, 125 Hz                                  |
| Crossover slope .....                                                                                                        | -12 dB/oct                                            |
| Tone controls                                                                                                                |                                                       |
| (Bass) .....                                                                                                                 | ±12 dB (100 Hz)                                       |
| (Treble) .....                                                                                                               | ±12 dB (10 kHz)                                       |
| Loudness contour ....                                                                                                        | +10 dB (100 Hz), +6.5 dB (10 kHz)<br>(volume: -30 dB) |

### CD player

|                                 |                                                                         |
|---------------------------------|-------------------------------------------------------------------------|
| System .....                    | Compact disc audio system                                               |
| Usable discs .....              | Compact disc                                                            |
| Signal format .....             | Sampling frequency: 44.1 kHz<br>Number of quantization bits: 16; linear |
| Frequency characteristics ..... | 5 – 20,000 Hz (±1 dB)                                                   |
| Signal-to-noise ratio .....     | 94 dB (1 kHz) (IHF-A network)                                           |
| Dynamic range .....             | 90 dB (1 kHz)                                                           |
| Number of channels .....        | 2 (stereo)                                                              |

### FM tuner

|                                       |                                           |
|---------------------------------------|-------------------------------------------|
| Frequency range .....                 | 87.9 – 107.9 MHz                          |
| Usable sensitivity .....              | 11 dBf<br>(1.0 μV/75 Ω, mono, S/N: 30 dB) |
| 50 dB quieting sensitivity ....       | 16 dBf (1.7 μV/75 Ω, mono)                |
| Signal-to-noise ratio .....           | 70 dB (IHF-A network)                     |
| Distortion .....                      | 0.3% (at 65 dBf, 1 kHz, stereo)           |
| Frequency response .....              | 30 – 15,000 Hz (±3 dB)                    |
| Stereo separation .....               | 40 dB (at 65 dBf, 1 kHz)                  |
| Selectivity .....                     | 70 dB (2ACA)                              |
| Three-signal intermodulation          |                                           |
| (desired signal level) .....          | 50 dBf                                    |
| (two undesired signal level: 110 dBf) |                                           |

### AM tuner

|                          |                    |
|--------------------------|--------------------|
| Frequency range .....    | 530 – 1,710 kHz    |
| Usable sensitivity ..... | 18 μV (S/N: 20 dB) |
| Selectivity .....        | 50 dB (±10 kHz)    |

### Note:

- Specifications and the design are subject to possible modification without notice due to improvements.

Connection Diagram

DEH-P86DHR,P76DH

